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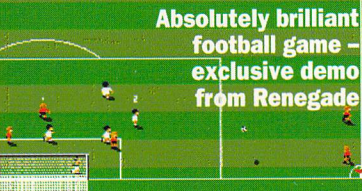
TESEREA
Complete wacky
falling block'em-up
MISTY
Sexy STOS commands
SYSTEM BEEP
Replace that beep
with a sample
TYPING TUTOR
Learn to touch type
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Disk-kit, Convert 4,
GFA listing and more...



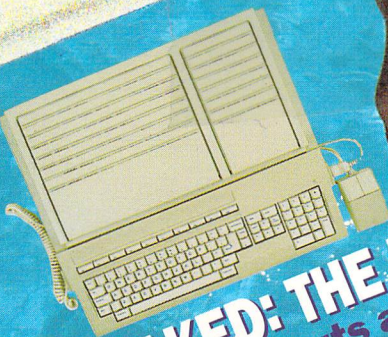
MAPPER 2

Easy! Create
gorgeous sprites
and maps with this
powerful designer

COVER DISK 38 SENSIBLE SOCCER



Absolutely brilliant
football game—
exclusive demo
from Renegade



NAKED: THE MEGA STE
Read our nuts and bolts review

FIRE AND ICE
The brilliant cool
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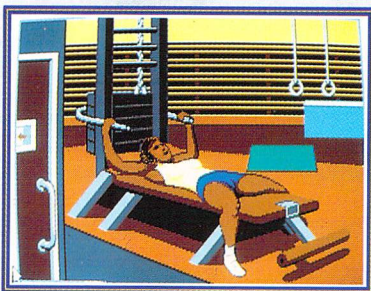
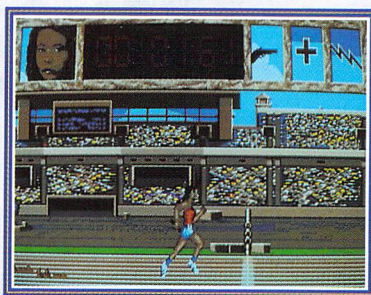
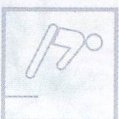


COMPETE
WITH THE
BEST

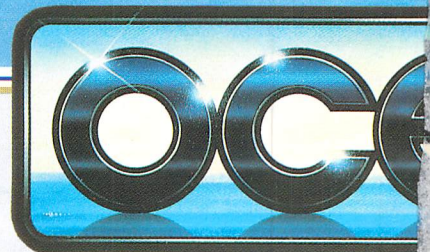


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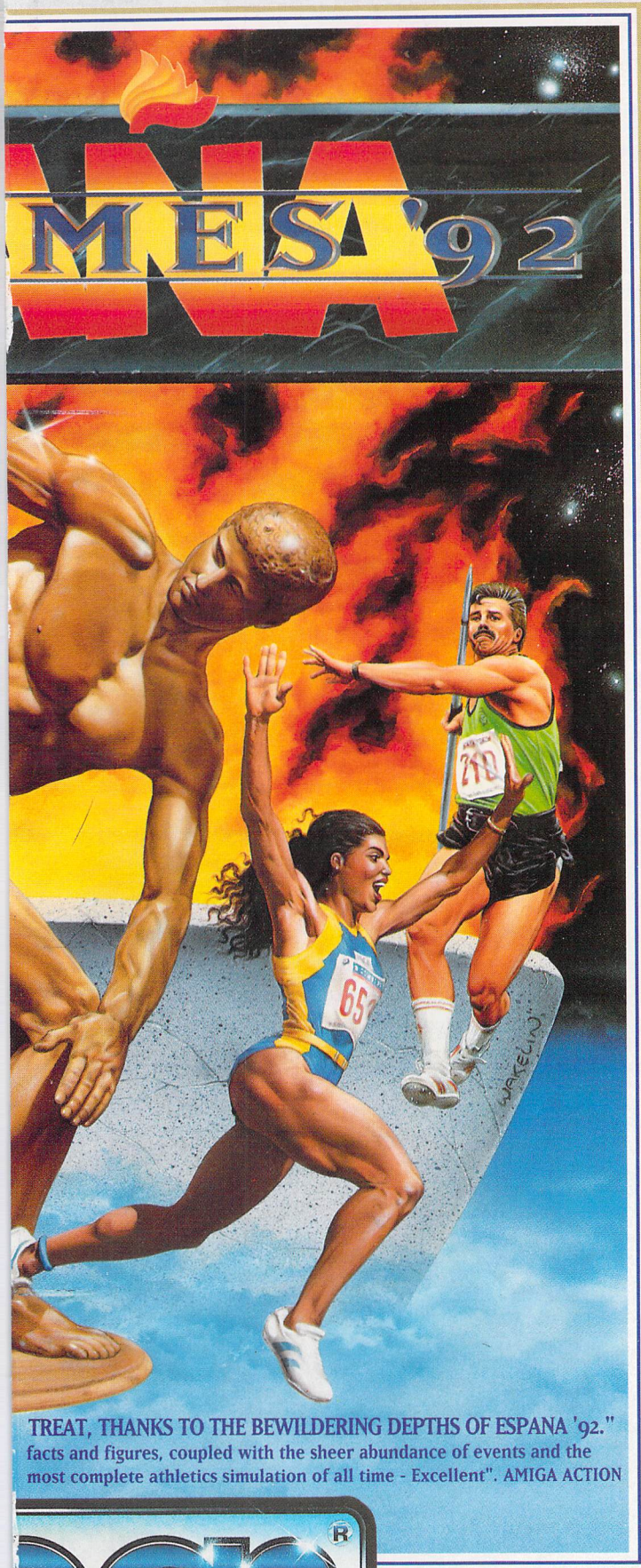


"THE SPORTING PURISTS AMONG YOU ARE CERTAINLY IN FOR A
"Never before have I seen an athletics game with so many intricacies,
authenticity of the management element. ESPANA '92 must go down as the



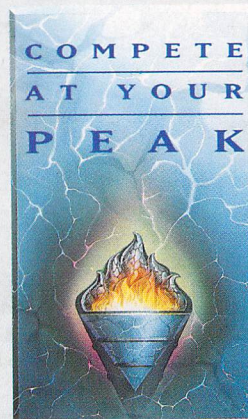
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SPORTS SENSATION



TEAM MANAGEMENT

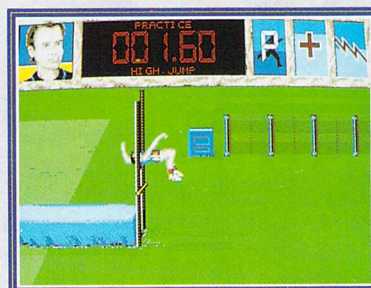
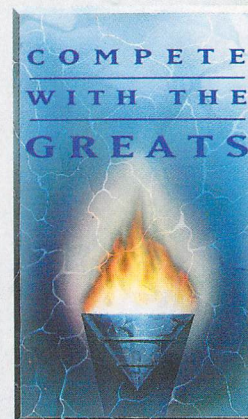
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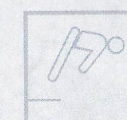
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 Coming soon, on the way, dropping in from outer space and otherwise destined for the review pages. Also the last page. Apart from the inside cover that is.

SCREENPLAY

The latest ST games to be released reviewed and rated - page 69

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THE GREAT STF COVER DISKS



"SERIOUS SPORT HAS NOTHING TO DO WITH FAIR PLAY..."

... It is bound up with hatred, jealousy, boastfulness, disregard of all rules and sadistic pleasure in witnessing violence: in other words it is war minus the shooting." Prove Mr Orwell right - play our exclusive demo from Renegade's *Sensible Soccer*.



Cover Disk 38

It's that time of the month again – and here's another graceful disk brimming with bubbly yet forceful Cover Disk programs just waiting for two intrepid explorers. Those explorers are Chris Lloyd and Andy Lowe and this is their story...

Flavours of the month...

Sensible Soccer – Sensible Software's brilliant playable game of footy

- See the preview on page 70

Page 6

Mapper 2 – Sexy utility for creating sprites and maps for games.

Page 8

Teserae – A deadly addictive falling stack-'em-up.

Page 6

Typing Tutor – Learn to type with compu-teach.

- See the Summer School feature on page 30

Page 7

Misty – Complete new STOS extension with fab commands.

- Follow the STOS tutorial on page 117

Page 8

System Beep – Change your beep to something more exciting.

Page 7

Disk-Kit – Handy set of disk utilities in a single Desk Accessory.

Page 10

Convert 4 – Convert files so you can use them with Super Card 2 which was yours with STF 35. Turn to page 40 if you missed it.

Page 12

GFA Listing – Full source code of program launcher.

- This month there's a GFA special in ST Answers, starting on page 55.

Page 12

Back Up – Makes a copy of the Cover Disk in a trice.

Page 10

Stars Update – Working compiler version for the Stars STOS extension.

Page 10

READ THIS BIT FIRST!

Fasten those safety belts

To keep your STF Cover Disk safe, keep it write-protected by moving the black tab so you can see through the hole. Nothing can now be written to your Disk, so there's no chance of you writing over or deleting any data. This also keeps your Disk completely safe from viruses. The Disk is guaranteed virus-free, so don't take any chances.

Get ready for action

Space on the Cover Disk pages is limited, so you may often find text files on the Disk with more information. These have the file extension DOC – the three letters after the full stop. It's always a good idea to read these for more information on the program. Just double-click on them and select Show to display the text on-screen. If you find that half the text disappears off the right-hand side of the screen when you try to read a DOC file in low resolution, then change to medium resolution and try again.

Engage reverse (backup, geddit?)

To keep your valuable ST FORMAT Cover Disk safe you should back up the disk, so if anything should go wrong you've still got the original.

Because we use a special disk format to squeeze even more goodies onto the Disk, you can't do a direct disk to disk copy – you can't just drag the Floppy Drive A icon over the Floppy Drive B icon. But fear not: we've made life easy for you with this backup program. Just follow the instructions below and you can't go wrong! Now there's no need to risk damaging the data on your Disk or losing it again!

- **Note:** some programs are compressed to fit on the Disk and cannot be run directly from it. Follow the instructions for each program in these Cover Disk pages and everything is sure to come up roses.

Oh no! There's a wheel missing

ST FORMAT now uses a double-sided disk format. If you are one of the few ST owners still with a single-sided internal drive and no external drive, then you're out of luck – you can't read STF Cover Disks, or, for that matter, virtually any current software. This is because single-sided drives are obsolete, and it is well worth upgrading. Replacement drives are cheap and easy to fit. At a stroke you can double your disk storage capacity. We brought you a guide to fitting internal drives in STF 32 – turn to page 40 to order it if you missed it.

Sensible Soccer

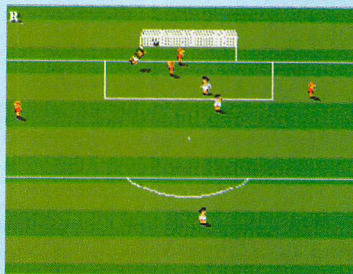
BY: SENSIBLE SOFTWARE

RESOLUTION: LOW ONLY

FOLDER: SOCCER

FILES: SOCCER.PRG

GET STARTED WITH: SOCCER.PRG



- "And, oh yes, it's there! The goalie never stood a chance with that vicious blockbuster from the foot of the star centre-forward!"

Open the SOCCER folder, double-click on SOCCER.PRG and you're into a playable demo of the most exciting and addictive soccer simulations yet to grace the screen of your ST. The demo pits you, as the Italian team Napoli, against the talents of Dutch superheroes Feyenoord in a three minute(ish) game to set your heart racing with anticipation for the real thing – watch out for the full review next issue.

One of the best features of the action is the instinctive and inventive method of joystick control which gives the game a fast, hectic appeal without skimping on the realism. Tapping the button when you've got the ball means you can perform a basic pass to your nearest colleague within a realistic

Teserae

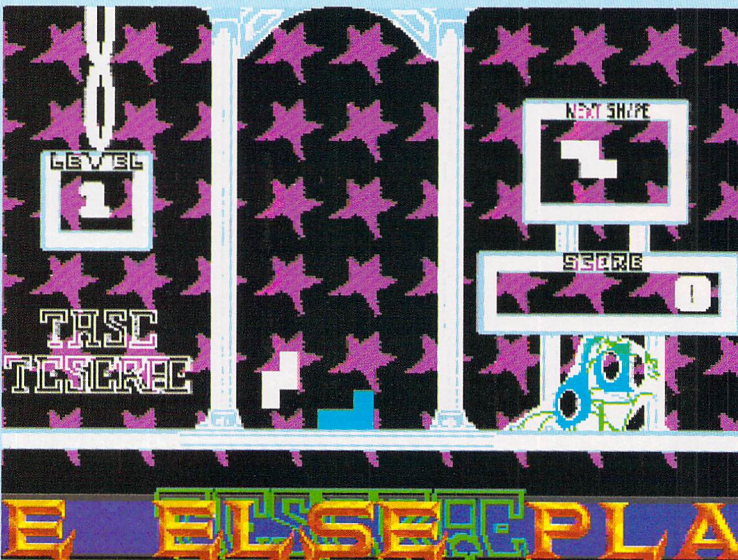
BY: STEPHEN BLAND

RESOLUTION: LOW ONLY

FOLDER: TESERAE

READ: READ ME.DOC

GET STARTED WITH: TESERAE.PRG



- Well, this looks pretty easy! Just slot this one in here, that one in there...

Typing Tutor

BY: STEVEN SCHMITZ

RESOLUTION: MEDIUM AND HIGH

FOLDER: TYPE_TUT

FILES: LESSON1.DOC,

KEYBOARD.PRGS

GET STARTED WITH:

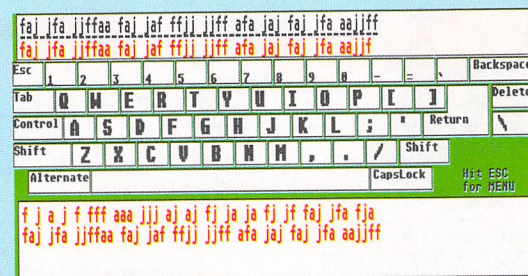
KEYBOARD.PRGS

The old button-pushing skill of typing is most handy, if not absolutely vital

when you're getting productive with your ST. *Typing Tutor* is a simple and easy aid to brushing up on your digital dexterity.

Open up the TYPE_TUT folder and run KEYBOARD.PRGS. After a beeping introductory screen, just press the mouse button to continue – you're then given a choice of lessons. You might consider this to be pretty radical, but starting with lesson one is often the

best procedure. Just follow the on-screen instructions. On page 34 our very own Andy "that's no typo" Hutchinson gives us all a quick key-tapping lesson on how to use *Typing Tutor* in our sun-drenched series of projects starting on page 30.



● *Typing Tutor* soon has you whizzing across those keys writing about jffa faj jaf faajj fjf. After your efforts, it tells you how long you took, your words per minute speed and the number of mistakes you made.

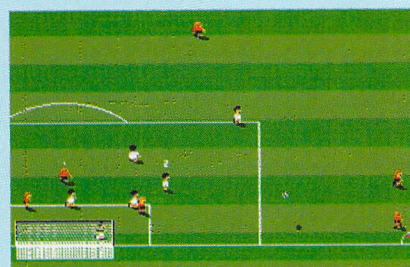
European Champions

catchment area. Keeping the button pressed releases a blinding belt downfield – or up, depending upon your playing ability. When the ball is in mid-flight, tilt the joystick in the opposite direction to lift it for chips and high balls. The more you tilt your joystick, the higher it goes. If you move the joystick where you want, you can steer the ball to achieve gravity-defying swerves.

When your numbered player is not on the ball, hitting the joystick button enables him to either slide in and tackle an opponent with the ball, foul one without it or perform a devastatingly athletic diving header. OK, that should be all you need to know to get yourself dangerously addicted and foaming at the mouth ready for more...



● "Well, the Napoli team, disheartened but by no means defeated, prepares to kick off and, of course, no team is more dangerous than when it's a goal down – in much the same way that no commentator is more dangerous than when he's running out of clichés."



● "So here, on this unusually mild afternoon, the players congregate at the goalmouth and the soft, uneasy tension of a forthcoming corner kick washes over the proceedings..."

tion from the not-quite-so-experienced T***** player.

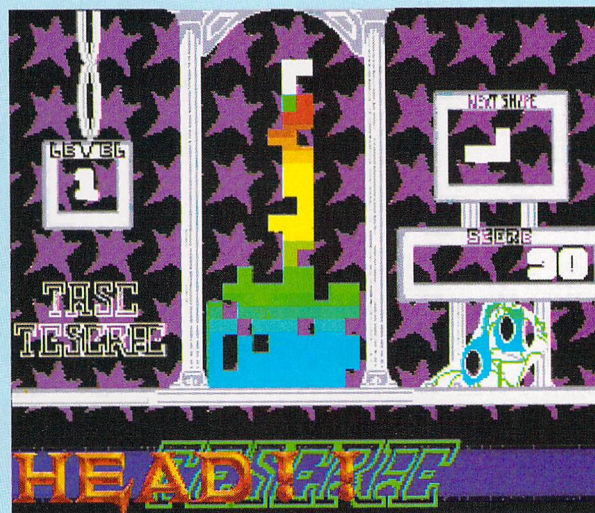
The idea is to rotate a variety of curiously shaped blocks until you're satisfied with how the overall configuration is going to look after you've slotted 'em in and – er, that's about it.

A block appears and slowly trickles down the screen, then it's your job to nudge it into the most appropriate position without making things too awkward for yourself in the long run. Hitting the Spacebar rotates the objects, the left and right cursor keys manoeuvres them and the down cursor key places them into position. You can use a joystick, but the cursor keys were invented for this kind of delicate operation and you'd do well to unplug yourself and get down to basics.

If you manage to form a solid line across the playing area, it disappears to give you more space. The only help you get is the "Next Shape" box, which

gives a preview of, well, the next shape to come so you can prepare the structure of the shapes more effectively. If you carelessly allow them to pile up to

the top of the area, then you get treated to a few rather sarcastic scrolling messages and have to start all over again.



● Ah, perhaps it isn't so easy after all, and now I'm being mocked by some impudent scrolling messages!

System Beep

BY: DAVID THOMSON

RESOLUTION: ALL

FOLDER: SYS.BEEP

FILES: SYSBEEP.PRGS,

SOUND1.SAM,

SOUND2.SAM

GET STARTED WITH: SEE BELOW

Your ST beeps, doesn't it? When it wants to alert you to something that it can't do, like the fact that you're clicking with the mouse outside a fileselector or GEM alert box. It goes beep – short and sweet – but also functional and uninspiring.

Sysbeep turns that beep into a real funky sampled sound. What's more, you can use any sample you like – let your imagination run wild – and irritate everyone else beyond belief. The program itself, SYSBEEP.PRGS, needs to be placed in your AUTO folder of the boot disk to work. The boot disk is the disk in the drive when you first switch on and the AUTO folder is a folder called er, AUTO. Any programs inside this folder are automatically run when you first switch on your ST. The sample that you want to replace the beep needs to be called SYSBEEP.SAM and live in the root directory of your boot disk – that is, not inside any folders.

There are two rather good meaty beep samples sitting on the Cover Disk – rename one of them and copy it to your boot disk – then you're ready to rock and roll. A little welcoming message should come up telling you Sysbeep is installed. It serves no purpose at all, is rather silly and makes funny noises – we love it.

512 COLOUR PAINT PROGRAM ON SECOND DISK – PAGE 17

Misty STOS Extension

BY: BILLY ALLAN AND COLIN WATT

FOLDER: MISTY

FILES: EXAM1.BAS, EXAM2.BAS,

INSTALL.PRg

GET STARTED WITH: SEE BELOW

No matter how stunning and powerful a computer language is, there's always

going to be room for improvement. Maybe some of the commands aren't quite fast enough or don't do what you want. STOS can add more commands if you install a language extension. If you don't have a copy of STOS Basic sitting proudly in your disk box, then you must have been somewhere else last month because we gave away the full inter-

preter version – turn to page 40 if you were elsewhere. Misty is a new and rather enigmatically-named extension that adds 19 powerful new commands. Among the goodies you can now try is *skopy*, a faster version of *screen copy* that can also just copy selected bitplanes enabling you to do all sorts of snazzy effects – it's also very fast.

Mouseoff does what it says – it turns off the mouse. STOS already has the *hide* command but all that does is remove the mouse from view – it still uses valuable processor time to update its position. This one, however, zaps the thing completely. To install these and the 17 other commands, run INSTALL.PRg and be ready with your

Mapper 2

BY: PAUL JOHNSON

RESOLUTION: LOW ONLY

FOLDER: MAPPER

FILES: MAPMANII.PRg

GET STARTED WITH: MAPMANII.PRg

It's groovy graphics time again – so open the digital paint and slap it around a bit using *Mapper*. It's a fast, powerful sprite and map definer and there's also a full-blown sprite editor with animation and map creator to

boot. Take a look at those features – phoar, eh? *Mapper* is Shareware, and, when you run MAPPERII.PRg in the MAPPER folder, you are greeted with a title screen with registration details. Be patient though, it's on a

timer so there's no point clicking any buttons. Now you've no excuse not to produce stunning graphical spriteness for your latest coding creation, so don't try any lame excuses when the final bell goes.

MAPPING OUT

This is the swish section that enables you to create maps using your sprites. Map sprites or cells are made of sections 16 x 16 pixels square and are held in the current workscreen. The map files that are created start with a two byte header holding the width and height followed by a one byte number that holds the cell numbers starting at zero in the top left of the workscreen, then going from left to right in rows. You can quickly create huge graphics from simple building blocks by loading in the workscreen which has the map cells and the map file into your own programs

SAVE AND LOAD MAP – enter the name of the map to load or save, then hit <Return>.

CELLS UP AND DOWN – scrolls through the cells available from the workscreen.

SAVE AND LOAD POLY MARKERS – just like it says – type in a name and press <Return>. Each map can have one set of marker groups.

CREATE MAP – used to create a map from scratch. Enter the size of the map – it can be between 16 and 256 cells across, and between 12 and 192 cells down. You need to define your map size before you start plonking cells on it.

RETURN – zaps you back to the sprite editor.

ADD POLY MARKERS – puts a series of reference points on the map that you can save as a separate file for reference. They don't become part of the map itself – just click on the map with the mouse to define your series of points.

POLY MARKER DUPLICATION – adds an extra poly mark next to a designated existing one.

POLY MARKER MOVE – you can now drag the markers about the map by clicking and holding down the left button.

MAP DISPLAY – the current map. Scroll about by holding down the right button and wiggling.



FULL VIEW – displays the entire map in zoom mode – one pixel equals one cell.

CELL DISPLAY – pick your cell from the selection taken from the current workscreen.

STOS disks. Press <1> to install the Misty extension on your STOS language disk and <2> for the compiler if you have that too. Pressing <3> writes the all-important document file with the low-down on all the new commands and the registration details.

Misty is Shareware – if you like and use it, then you're asked to register

your copy with the programmers for the modest sum of a fiver. If you do so, you get the latest version of the program, example listings of each command, demo source code and more goodies. Sounds worth it, doesn't it? It brings peace of mind, too, 'cos you know you'll have been a hero and done the right thing.



● The installation program for Misty – an up and coming STOS extension. Good form so far, plenty of potential and a bright future – a possible contender. Has lots of sexy new STOS Basic commands, a powerful left hook and devastating quiche recipe.

SPRITES ALIVE

The sharp end of things – *Mapper* has a sprite definer with a very smooth action. There is a mass of powerful functions to make sprite creation as near a doddle as it's ever going to be. Your creations are pasted onto a workscreen and saved as *Neochrome* pictures. You can then import them into any program written in any programming language and send them careering around the shop

1 WORK-GRID – the business section of things. You draw your sprites here.

2 COLOUR BAR – the current palette. Click with the mouse buttons to pick colours one for the left button and one for the right one.

3 SPRITE WINDOW – shows the sprite at actual size. Animation is displayed here, too.

4 STATUS PANEL – Left to right this shows the current workscreen, the selected colour RGB values, animation speed, sprite size and current mode.

5 POINT – slaps a pixel on the work-grid using one of the two colours you've selected with each of the mouse buttons.

6 LINES – draws straight lines. Click on the work-grid with either button to select the colour and starting point of the line. Click again with the left button to draw the line.

7 BOX – selected with the left button, this option draws frames. If you click with the right button you get filled boxes. Click on the work-grid with either button to choose the colour, then, to draw your box, move your mouse around and click again with the left button.

8 CIRCLE – works in exactly the same way as the box function, but produces circles instead.

9 SPRAY – splashes pixels onto the work-grid in either colour.

10 FILL – fills an area with either colour depending which button you use to click on the work-grid.

11 ROTATE – spins the whole grid by 90 degrees.

12 COPY – enables you to copy areas around the work-grid. Just click with the mouse button and drag to select an area and slap it down again with the left button.

13 OUTLINE – draws an outline with a selected colour over the entire work-grid.

14 SHADOW – creates a shadow effect with the main colour on everything positioned on the work-grid. Click on the icon with the right button to select the direction of the shadow.

15 EXCHANGE – exchanges a selected colour from the work-grid with the current colour.

16 DITHER – messes-up the screen by pushing the pixels about.

17 VERTICAL FLIP – spins the work-grid about its horizontal axis.

18 HORIZONTAL FLIP – spins the work-grid about its vertical axis.

19 COLOUR CYCLE – sends the colours into a frenzy – well, those between the two markers. The speed icon adjusts the speed.

20 PICK COLOUR – enables you to pick any one of the 512 colours directly.

21 LOAD AND SAVE PALETTE – enables you to retrieve and store the current palette

into the store of 12 palettes. Just click on which one you want to replace or fetch.

22 DEFINE – a powerful function that enables you to grab your sprites from the work-grid and paste them on to one of the four workscreens. If you select this icon with the right button, one of the preset sprite sizes is used – the current one is shown in the status bar at the bottom. There are ten sizes which you can select using the function keys. If Define is selected with the left button, the area is grabbed in the same way as a box is drawn. Once you've got your area, the display flips to your workscreen and you can plonk the area down where you like – all paste operations are clipped to the nearest 16 pixels. With this function you can build up screens of your sprites ready to be loaded into your programs.

23 RETRIEVE – like Define but grabs sections of the workscreen and pops them into the work-grid using the current sprite size.

24 WORKSCREENS – click on these to change the current workscreen – using the right button also enables you take a butcher's.

25 RED, GREEN AND BLUE – changes the RGB values of the current colour. The left button increases the value by one, the right one decreases it. The numeric value is shown in the status bar.

26 HELP – click on this and then on another icon for a brief explanation of its function. Click again to exit.

27 WRITE MODE – there are three graphics modes. The left button increases the number of the mode and the right decreases it. Mode 1 is the default where all graphics overwrite the existing ones. Mode 2 is the background mode where only the background colour is altered. Mode 3 is the foreground mode – only existing graphics can be altered. The background is fixed. Experiment with these for interesting effects.

28 SCROLL GRID – these scroll round the whole work-grid in the four directions.

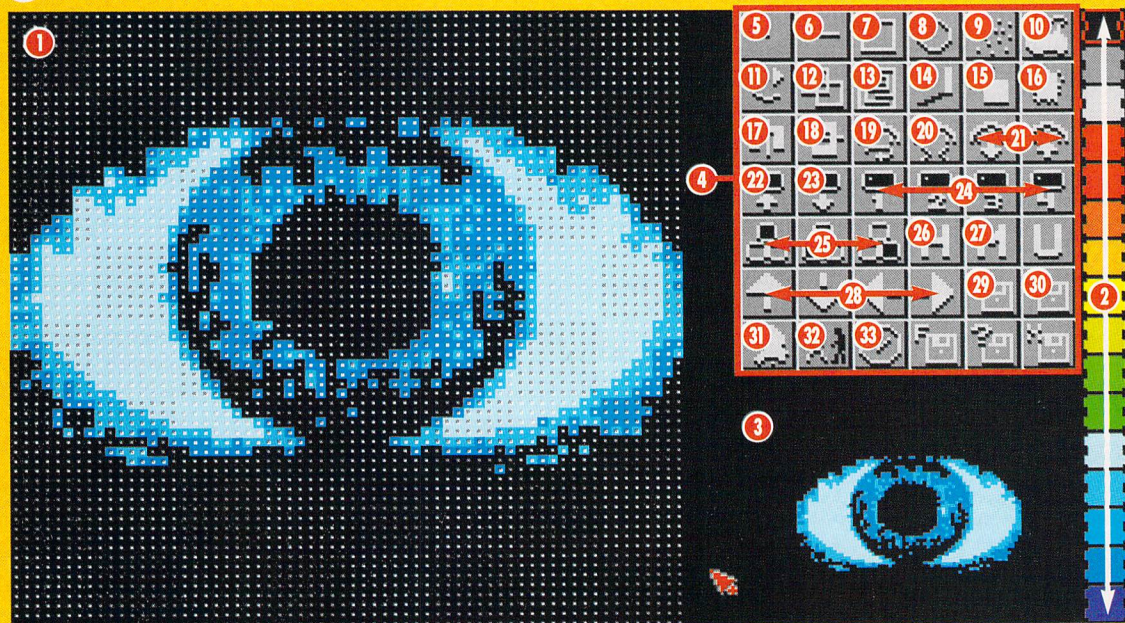
29 LOAD NEO – loads a *Neochrome* picture into the current workscreen. The picture must be in the same directory as *Mapper*. Just type in the name and press <Return>.

30 SAVE NEO – type in a name and press <Return>. Bingo! The current workscreen is saved as a *Neochrome* picture.

31 MAP – sends you to the map screen.

32 ANIMATE – grabs frames from the current workscreen using the default sprite size with the left button. Click with the right button once you've grabbed all the screens. The animation appears in the sprite window. Adjust the speed with the speed icon and get out of that by clicking on the animate icon again.

33 SPEED – adjusts the speed of colour cycling and animation. There are eight settings, the current one is displayed in the status bar. The left button increases the value of the setting whereas the right button decreases it.



PROBLEMS? WHERE TO FIND HELP

1. MY STF COVER DISK WON'T LOAD!

Before you do anything else, check that you don't have a single-sided drive (one older than 1988, that can't format any disks to more than 360K) – they can't read new *ST FORMAT* Cover Disks. Single-sided drives are obsolete and it's well worth upgrading. Replacement drives are easy to fit and cost as little as £35. We covered fitting new internal drives in *STF* 32 – turn to page 40 to order a copy if you missed it.

Drive OK, but still no joy? *ST FORMAT* duplicates hundreds of thousands of Disks every month. Inevitably a few are defective or damaged in some way – the Disk just won't load, or you can't open a window at all, or there's nothing in it, or the folder names are gobbledygook. It doesn't happen often, but if you're unlucky, sorry. You're guaranteed a free replacement if you return the Disk to:

**ST FORMAT September Cover Disk Returns, TIB plc,
36-50 Adelaide Street, Bradford, Yorkshire BD5 0EA.**

Enclose a sturdy self-addressed envelope (unstamped – we'll pay the postage) and a brief letter explaining the problem. TIB promise to replace your defective Disk within one week of receiving it. (If you're worried about trusting your precious Disk to the mail, the Royal Mail's Recorded Delivery service costs only 30p on top of the normal postage.)

Please don't send your defective Disk to any other address – we have no stocks of Disks in Bath.

2. THIS COVER DISK PROGRAM DOESN'T LOAD!

If only part of your Disk won't load, TIB invite you to ring their Cover Disk Helpline and talk through your problem before you send back a perfectly good Disk. Telephone ☎ 0274 736990 during normal office hours and ask for Sam Hiah, *ST FORMAT* Cover Disk Helpline.

3. I CAN'T WORK OUT THIS COVER DISK PROGRAM!

Your Disk seems OK, everything loads, but you've got a problem with one of the programs. Make sure you've read all the relevant Cover Disk pages and any document files on the Disk. Try consulting your *ST* Owner's manual – that may have the information you need. Still got a problem? Then give us a ring on Wednesday afternoon. Telephone the *ST FORMAT* Cover Disk Hotline ☎ 0225 442244 on Wednesday 2 – 6 pm only.

We don't write the Cover Disk programs ourselves and don't know anywhere near as much about them as the programmers do, but we'll do our best to try and sort your Cover Disk problems out.

Please note that this line is for Cover Disk problems only. If you have any other queries, read on!

4. I HAVE A PROBLEM WITH THIS OTHER PROGRAM I'VE BOUGHT!

The best place to start is the distributor of the program. Most software houses run some kind of helpline service – check the bump that came with your software for the number.

5. I'VE STILL GOT AN ST PROBLEM!

If you've still got a problem – you suspect your machine may be faulty, or you're not sure about some procedure, or you need an answer to a more general query – then you have two options.

(a) Ring the official Atari Helpline ☎ 031 332 9323 on between Monday and Saturday 6 pm – 11 pm or on Sundays between 8 and 11pm.

(b) Write to *ST* Answers and let *ST FORMAT*'s team of experts tackle your problem in the pages of *STF*.

FAME & FORTUNE AWAIT YOU

We'll pay well for *your* software – games, utilities, demos – anything good, original and short. If you've written anything worthy of *STF*'s Cover Disk, send it with this form and documentation to: Chris Lloyd, *ST FORMAT* Cover Disk Editor, 30 Monmouth St, Bath, Avon BA1 2BW. Then please be patient: we get heaps of submissions, and we try to give them all a fair testing!

Name

Address

Daytime phone

Program title Total size in K

On a separate sheet, explain concisely what the program does and what's great about it.

Remember to: ● Include on-disk and paper documentation ● Write your name and address on the disk ● Use a virus-free disk ● Keep a copy of your program, because contributions are non-returnable ● Enclose wads of cash. We pay for programs we use, but the next round's on you...

Please sign the following declaration: This program is submitted for publication in *ST FORMAT*. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

Signed

Disk-Kit

BY: CLIVE PARKER

RESOLUTION: ALL

FOLDER: DISK_KIT

FILES: DISK_KIT.ACC,

READ_ME.DOC

READ: READ_ME.DOC

GET STARTED WITH: SEE BELOW

Imagine the situation: you're doing a spot of word processing or work on your latest piece of programming, and you need to save a file but you don't have a blank disk ready. You need to format a new one – only you can't do that without quitting the application you're in. And you can't do that without losing all the work you've just done. The

solution is to hide in a cupboard and hope it all goes away. Alternatively – and probably slightly more practically – is to use a Desk Accessory. These little beasties can be called from the menu bar at any time to perform handy little functions. Desk Accessories are loaded from the boot disk – the disk in the drive when you switch your *ST* on. Not only can *Disk-Kit* potentially format a disk, but the smartie can also create folders, rename files and enable you to get at the fileselector at any time – now isn't that what you always wanted? Just select *Disk Stuff* from the Desk Accessory menu and take your pick.

Cover Disk Back-up

BY: BRIAN TILLEY

RESOLUTION: ALL RESOLUTIONS

FOLDER: BACK_UP

FILES: BACK_UP.TOS,

BACK_UP.DOC

GET STARTED WITH: BACK_UP.TOS

You can't be too careful – your parents told you that, didn't they? Are you? Do you back-up your *ST FORMAT* Cover Disk ever month, just in case some bizarre accident befalls it? *Back-up* is a terribly handy program which takes all the needless hassle out of the process. Before you do anything, write-protect your Cover Disk – move the little black tab so you can see through the hole.

Nothing can now be written on or deleted from the disk. Now get a new disk ready and run *Back-up*. From the menu, press <1> and swap disks when prompted – zaperoo! an instant copy. The source disk is the disk you are making the copy of – the Cover Disk. The destination disk is the intended backup disk. If you have two drives, drive A is used as the source and drive B as the destination. *Back-up* can also be used to back up other disks. Press <2> to see if it's possible. You can't get past the copy-protection on commercial disks – and anyway, copying them is illegal – but almost all other disks can be copied. Read all that? Good, now back up the disk.

Stars Update

BY: LEE UPCRAFT

RESOLUTION: LOW ONLY

FOLDER: STARS

FILES: STARS.ECH

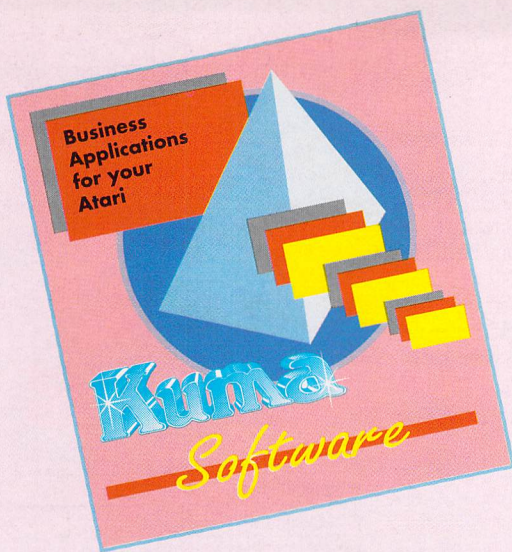
GET STARTED WITH: SEE BELOW

Because of the strange movements of the forces of nature and the meanderings of the fickle finger of fate, there was a mix-up with the *STOS Stars* extension on last

month's Cover Disk. The wrong compiler extension was included in the installation program which causes horrible crashes whenever you try to compile anything. The person responsible has been promoted to where they can't do any more damage – standard procedure, that. If you installed the compiler version, delete it, substitute this new one and everything should be tickety-boo. ➔

3D PICTURE

Er – sorry – the version of *3D Picture* we gave away on Issue 37's Cover Disk can't run under TOS 1.2, because of incompatibilities between *GFA Basic* and TOS 1.2.



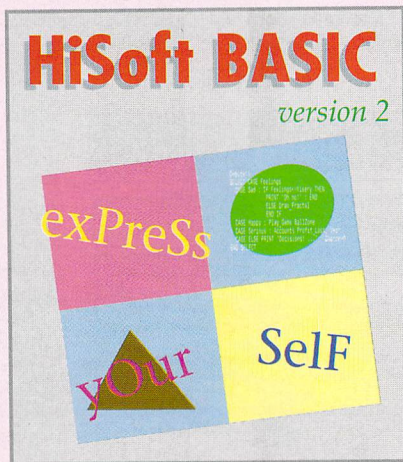
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The heat must have got to us ... look at these crazy prices on our top quality software packages! Just use the special order form on the right, tick the software you want and your preferred payment method - then send the form back to reach us by the 31 August 1992 and we will despatch your order within 5 working days of receipt. To cap it all, spend more than £100 on this order form and we will send you a £10 voucher redeemable against future purchases directly from HiSoft.

K-Spread 2 Cover Disk Users

If you obtained the excellent K-Spread 2 spreadsheet on the cover disk of last month's ST Format, you will be pleased to learn that you can still purchase the manual for only £29.95 and then upgrade to K-Spread 3 or K-Spread 4. Use the order form on the right and remember to send back your cover disk with your order - we will return this to you with your manual.

K-Spread 3 has many more Lotus-compatible functions (including database/statistical/financial operations), multiple worksheets, date/time calculations, loading of Lotus files, more extensive macro facilities etc. while K-Spread 4 offers all this plus live graphing (line graphs, pie charts etc.), forms design, enhanced sideways printing through GDOS and more.



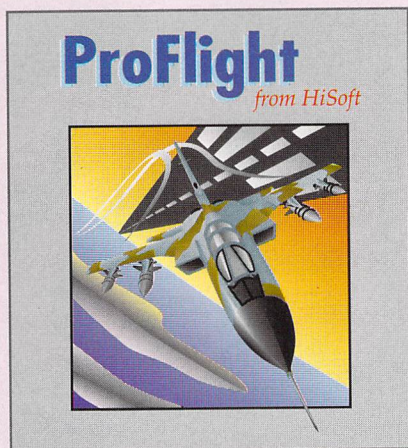
The BASIC of the 90s



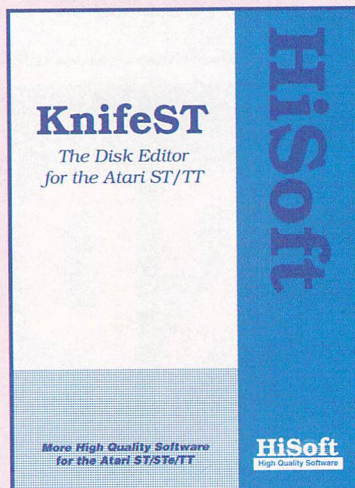
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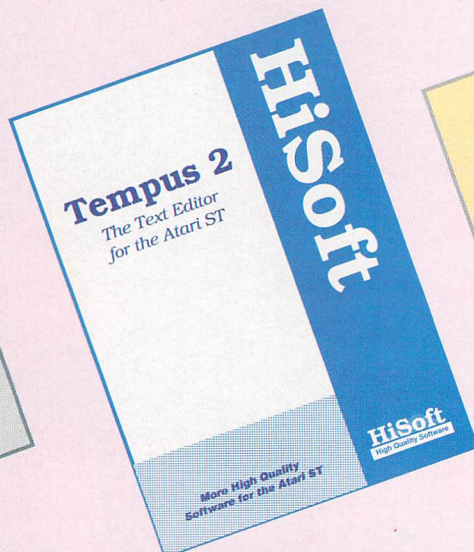
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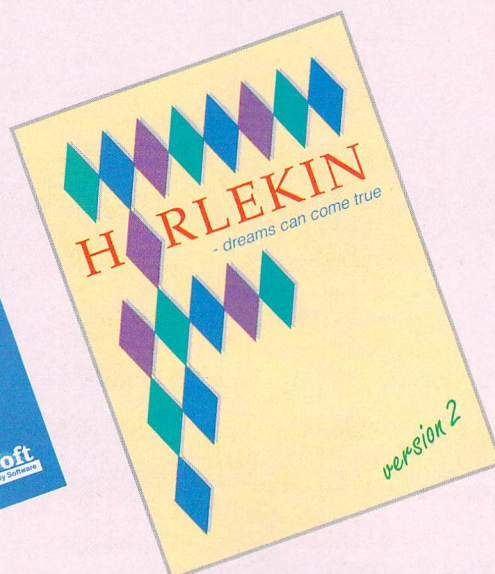
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Convert 4

BY: B.WARE SOFTWARE

RESOLUTION: MEDIUM AND HIGH

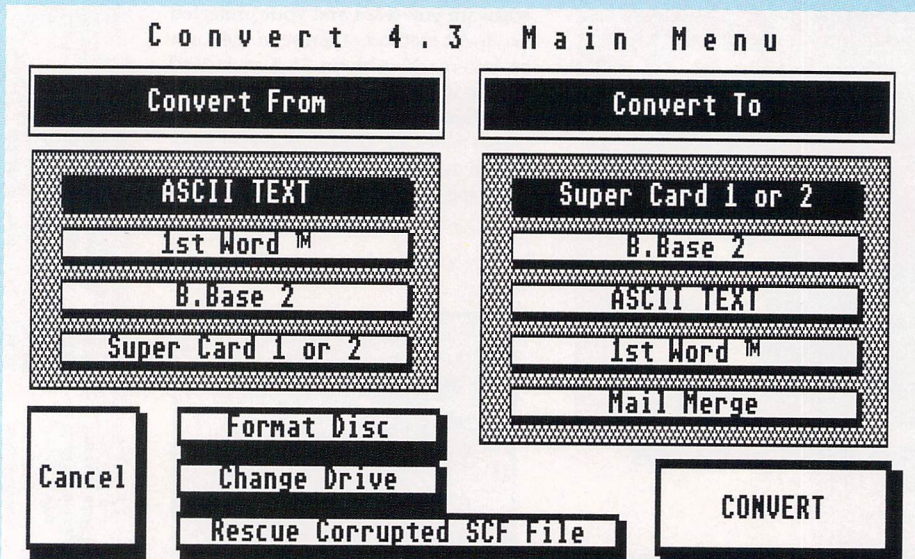
FOLDER: CONVERT4

READ: CONVERT4.TOS

GET STARTED WITH: SEE BELOW

If you're using the nifty number *Super Card 2* from Cover Disk 35 (and turn to page 40 if you don't have it), then you might find this conversion utility useful. It can convert various text formats to and from *Super Card*, including *First Word* and *First Word Plus*. The program

and the instruction document have been archived – that is, squashed into one file to save space. Copy CONVERT4.TOS to a blank disk and run it, it automatically unsquashes itself. Have a read of the document file called CONVERT.TXT for all the rap.



● *Convert 4* takes files and – wait for it, converts them. That clears up the little mystery about the program's title anyway. You can now use word processors to manipulate the same data.

GFA Menu Shell Listing

BY: BARRY CAPEL

RESOLUTION: LOW ONLY

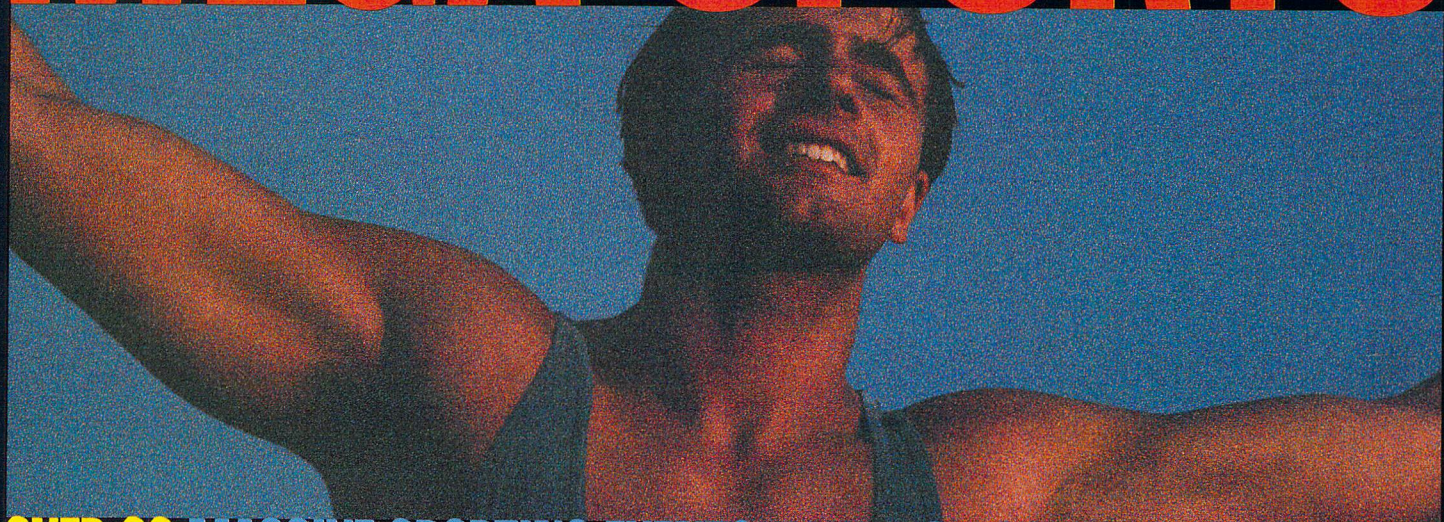
FOLDER: GFA

FILES: BAZMENU.GFA

GET STARTED WITH: SEE BELOW

A smart bit of coding this – it's the source code of a program that, when you put it into an AUTO folder, creates a menu system to run any PRG file. It's written in that most excellent of languages GFA Basic v3.5 which is yours if you have issue 35 and probably isn't if you don't. If you missed out on that corker, flip to page 40. To find out why this piece of source code is here at all, turn to ST Answers on page 55 and find out who asked the question in the first place.

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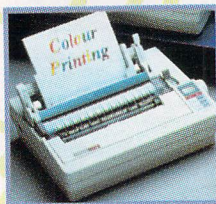


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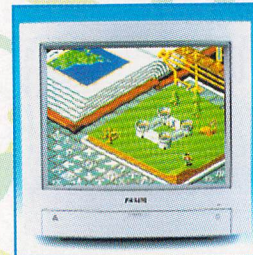
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Spectrum 512

Our generosity knows no bounds! This month we're giving you yet another excellent program – *Spectrum 512* which is absolutely the best full palette paint proggy in the Universe (some say). Clive Parker takes you on a step by step guide to help get you daubing, dabbling and – er, dazzling...

Don't you feel restricted by the fact that you can only use 16 colours out of a choice of 512 on your ST or, even worse, out of all those 4,096 hues on your STE? Well, now's your chance to break free and shade to your heart's content. With *Spectrum 512* you can create pictures on-screen using 512 colours and save them to disk, so you can load them back into the program, display them via a slideshow utility, use them as part of a video titling sequence or incorporate them into your own *STOS Basic* programs using *Spec Code* – also on this Cover Disk.

GETTING STARTED WITH SPECTRUM 512

Because *Spectrum 512* needs all the available memory to run on a 520 ST, you can't have any Desk Accessories or *AUTO* folder programs installed. Make a backup copy of *Spectrum* using the Back-up program supplied on the main Cover Disk and put your original disk in a safe place. Put your backup disk in the drive and reset your machine. A program called *SYNC.PR* runs, turning the screen black with some vertical red lines – after a few moments the normal GEM Desktop appears. If the lines do not appear,

turn off your machine for 20 seconds and reboot. Your machine is now synchronised and can display 512 colours.

Now double-click on *SPECTRUM.PR* to run the program – you can start in either low or medium res – the screen turns black with a red menu bar at the top. The black area is the workspace, if you left-click anywhere in this area, the menu bar vanishes.

STARTING TO DRAW

The mouse pointer icon looks like a pencil – holding down the left mouse button and moving the mouse draws a line in the selected colour. Pressing <Undo> makes the line disappear, pressing it again makes it reappear. <Undo> reverses the last action that you took in *Spectrum 512* – once you start a new action the previous one is fixed. At the end of the pencil icon there is a small dot that's one pixel in size, this dot is on all drawing tool icons and indicates where



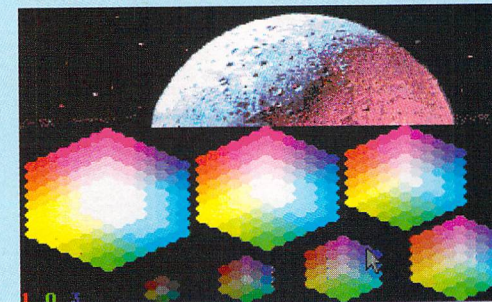
● There's an absolute plethora of little brush shapes to use, it makes you feel glad to be alive (sob).



drawing actions take place. To change to a larger brush, move the pointer to the top half of the drawing screen away from the edges, click with the right button and the red menu bar appears. The first icon in the top row of the menu bar selects the pencil option, the fifth icon selects the brush option. When you click on the brush icon, a sub-menu appears below the main bar – this happens with most options you select. The brush sub-menu contains 38 brush shapes and two letters, "A" and "O." Select a brush and the menu disappears, your pointer now looks like the brush selected. Move the brush around a bit to get the feel of drawing with the mouse.

COLOUR SELECTION

To take advantage of the full range of colours available in *Spectrum 512* you need to be able to select exactly the colour you want – move the mouse



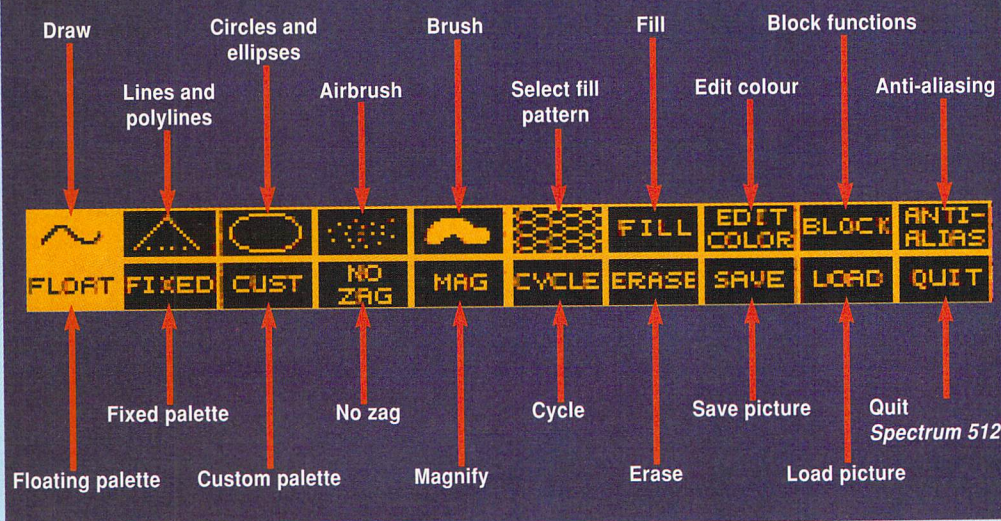
● These colourful objects in the lower half of the screen are called the Colour Matrix – you can select all 512 colours from these hexagons. The RGB value of each colour is shown in the lower left of the Colour Matrix area.

pointer to the bottom half of the screen and right-click. A display of seven hexagons appears, these are called the colour matrix. It is from here that you can select your colour. The matrix displays 511 of the 512 available colours arranged by degree of brightness. The background is the 512th colour – black. Also displayed is the RGB (red, green, blue light) value in the form of three numerals ranging from 0 to 7 – you can use these to record the exact values of the colour you are using.

If you want to know the RGB value of something you've already drawn on-screen to get an exact

THE MENU BAR

This is the main menu bar of *Spectrum 512*, all the main functions of the program are accessed from the 20 boxes on this bar





● This might look like a bee on a rainbow to you, but it's actually the custom palette. You can mix and match colours from each of the palette bars that are down the two sides of the screen.

match, call up the colour matrix and move the pointer over the colour in the picture you want to match and right-click. The colour is now selected. If you want to select a colour from a portion of the picture that is off the screen, press and hold the left mouse button over the picture area. You may now drag the screen up and down.

ERASER

Selecting the Erase icon from the menu bar changes the mouse pointer to a black box with a cross in the centre. Holding down the left button and moving the mouse erases all colours you move across. If you press <Alternate> while selecting the Erase option, you erase the whole picture. Pressing <Undo> cannot restore an erased picture.

THE COLOUR PALETTES

When you are in drawing mode, you can access three different palettes – these are the Floating, Fixed and Custom palettes and are selected from the appropri-

ate options on the main menu bar. Clicking on each of the options in turn displays the palettes in the margins of the screen.

Select the Custom palette and move the mouse alongside a colour in the left margin, select it and draw some lines. Do the same with some other colours. If you now select a colour from the right margin, the lines drawn with the last selected colour from the left margin change to the new colour. The right hand colours alter the active colour and affects everything drawn with the last active colour. So you do not accidentally change work you wish to keep when altering the active colour, simply call up the menu bar – everything drawn in the active colour is displayed orange while the menu bar is displayed. Right margin colour altering works with all three palettes.

Select the Floating palette and the margins fill with coloured bars – this is called the Shading area. Along the bottom of the screen are eight bars coloured from white to black – the Blending area. The top colour of the floating palette is the Starting Colour (the same as the active colour), with the 26 shades closest to it running down the screen. Draw some lines with the Starting Colour and then select a shade near the bottom of the bar and right-click on it, this colour now becomes the Starting Colour at the top of the bar – there is now a new set of 26 shades



● The Floating palette and the Fixed palette are identical. They're only different when you select a colour from the Floating palette – the chosen colour goes to the top of the palette and all the shades below are derived from the top colour.

below it. Every time you right-click on a shade, it becomes the Starting (and Active) colour. To retain a set of colours on-screen to work with, you must use the Fixed palette.

Select the Fixed palette from the menu bar and a similar display of 26 shades as the Floating palette appears in the margins. When you select a new colour to draw with, it becomes Active and the Starting Colour remains the same.

The Blending area enables you to select two colours which then produces all the blends in between. To use it, call the Colour Matrix and select bright blue (RGB 0,0,7). Now move the mouse to the left margin of the screen alongside the top of the Blending area. Press <Alternate> and right-click – the blending area now shows all colours between blue and black. Now select red (7,0,0) from the Colour Matrix and move the mouse to the left margin by the bottom half of the Blending area. Press <Alternate> and right-click and the blending area shows all colours between blue and red. Experiment with the different palette options.

ANTI-ALIASING

This option can be used to modify drawings in three ways: the Anti-aliase, the Blurrer and the Contraster. Pressing keys 1-9 alters the strength of the effect. The first option smooths jagged edges of diag-

A BLAZE OF COLOUR



Spe'ctrum n. (pl ~a) image formed by rays of light or other radiation or sound where the parts are arranged in a progressive series according to their refrangibility – that is, according to wavelength; this as characteristic of a body or substance when emitting or absorbing radiation; similar arrangement of component parts according to mass etc; ~um (or ~al) analysis, chemical analysis by a spectroscope.



DRAWING TOOLS

Airbrush: Select the icon full of dots – this lays down a spray of colour. You can use this with the Cycle function if you want to lay down a large selection of colours. Pressing keys 1-9 alters the “flow” of paint from the Airbrush.

Brush: Left-click on the thick wavy line. A sub-menu of brushes appears below the main menu bar.

Circle and Ellipse: Left-click on oval icon for circles, right-click for ellipses.

Cycle: Select a brush and select the Cycle option. When you draw lines they cycle through the colours of the Custom palette.

Draw: Left-click on the wavy line icon. The mouse turns into a pencil, you are then able to draw by pressing the left button and moving the mouse.

Fill to new: Select this by right-clicking on the Fill icon. This over-writes any colour that is presently on-screen except the active colour. Surround an area with a box of active colour and use fill to new within, the border

of active colour stops the fill from wiping the entire screen.

Fill: Select by left-clicking on the Fill option. Click in an enclosed area to fill with the selected colour.

Magnify: Select Magnify from the menu bar by left-clicking, nothing happens until you move the mouse until it touches the top edge of the screen. The magnify box appears (a box made up of dots) and you can move the mouse to the area you wish to study.

No Zag: Smooths lines into curves and gets rid of jagged lines when selected. Also works with Circle and Ellipse functions.

Polygon: Right-click on triangle icon. The same as Polyline except that the last and first points are joined upon completion.

Polyline: Left-click on triangle icon. Creates joined lines, place the start point by left-clicking once, every consecutive left-click ends a line and starts a new one. Exit by right-clicking.



● Using the magnify function you can study each pixel of the picture in tedious detail. Try this – turn on the magnify mode and colour the picture in pixel-by-pixel and time how long it takes to fill in the entire screen.

onal lines, draw a diagonal, a horizontal line and a vertical line and then select the Anti-alias icon. Press the letter "A" to select the Anti-aliaser and press "9" to generate the strongest effect, then double-left-click anywhere on the screen. Jagged lines are now smoothed.

Press <Undo> to return to the original picture and then press to select the Blurrer option. Press <3> to reduce the effect of the Blurrer and then left-click near where two lines join. You can now drag a box around an area you wish to blur, when



● The various wonderful blocky options – you can move a block to another part of the same screen, save it to the buffer or fetch a block from the buffer. Blocks can also be saved and loaded from disk.



● Using the block options you can chop up bits of your masterpieces and stick them down anywhere you like on the screen. This lioness has a few eyes too many at the moment, a bit of tidying up soon sorts it out.

you're satisfied with the area that you've covered left-click again. As you can see, the area in the box is now blurred.

You can generate boxes for any of the Anti-alias options. The last option is the Contraster. Press <C>

and then press <1> for the minimum effect. Pressing the Spacebar turns the mouse pointer into a magnifying glass, hold the left button down and move the magnifier over some lines. The colours diverge as the contrast between them increases. The magnify

SPECTRUM 512 MANUAL

If you enjoyed palying around with the ever so brilliant *Spectrum 512*, why not consider buying yourself the manual? Because we haven't got much space we can't go into much detail about the program, so we've cooked up this brilliant offer with the distributors of *Spectrum 512*, GST. The manual goes into great detail on all the aspects of the program including:

- Colour editing
- Air brushing
- Block functions
- Advanced techniques
- Anti-aliasing
- Synchronisation
- Patterns
- Palette editing
- Picture conversion

The 100 page manual, complete with *Spectrum 512* master disks can be yours for just £19.95 – all you have to do is complete the coupon below, then cut it out or take a photocopy and post it off to GST at the address below.

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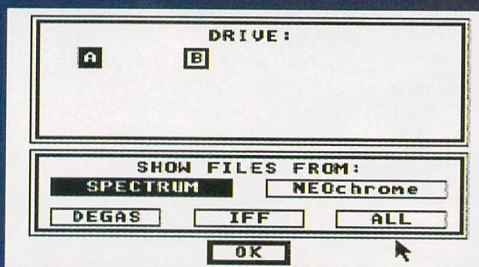
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SAVING AND LOADING PICTURES



● Call the menu bar by right-clicking near the top of the screen, then select Load using the right mouse button, this exciting dialog box is your reward. A file type can be chosen, the filename can be entered and the picture loaded from disk. If you select Load with the right button, you can only load *Spectrum* format files. *Spectrum* pictures may be saved as normal files or compressed files, the default setting being compressed.

effect for Anti-aliasing can be used with any of the three options.

EDIT COLOUR

Load in one of the supplied pictures and select Edit Colour from the menu bar. Here a left-click has a global effect and changes the entire picture – a right-click has only a local effect. A sub menu appears with a variety of options, the options available from this menu enables you to swap, replace, brighten and darken colours. Load in some of the supplied pictures and experiment with the various functions.

BLOCKS

The Block function can be used to chop out sections of the screen to be imported into other screens or saved to disk. Select Block and then select Pic » Buf, left-click and draw a box around an area of screen to be cut out and left-click again. Now click on Buf » Pic,

this takes you to the block buffer. You can double-left-click on a block to grab it, or cut out a smaller block. Once selected you return to the main picture where a dotted outline shows the position of the block.

Pressing <Shift> and moving the mouse enables the box to be made bigger or smaller, left-clicking pastes down the block, the block can be pasted as many times as required. Pressing <Esc> always returns the block to its original size.

Pressing <Alternate> and moving the mouse enables the box to be made taller or shorter, fatter or thinner.

Pressing the arrow keys flips the block vertically and horizontally. After all these operations a right-click returns to the Block menu. Experiment with the various Block options until you have the hang of it.

So, there you are – a quick whizz around some of the functions of *Spectrum 512* – get colouring and make the most of all those luvverly colours. *stf*

USING SPEC CODE AND STOS

To squeeze all those colours out of your ST *Spectrum 512* has to use some fancy machine code. It does the trick but makes displaying your pictures a bit tricky. *Spec Code* enables you to get those juicy graphics into *STOS* using a little piece of machine code and the *dreg* and *call* commands. These are commands that give you access to the central processor's data registers and enable you to call machine code programs from within *STOS*. Sounds pretty complex that's because – er, it's pretty complex. Luckily you don't need to know diddly-squat about this bit. Load *EXAM-PL.E.BAS*, run it and off you go. All you need to do is select which *Spectrum* picture you want to gawp at. Once you've been impressed for a while, check out the *rem* statements in the sample code for the full gen on using *Spec Code*.

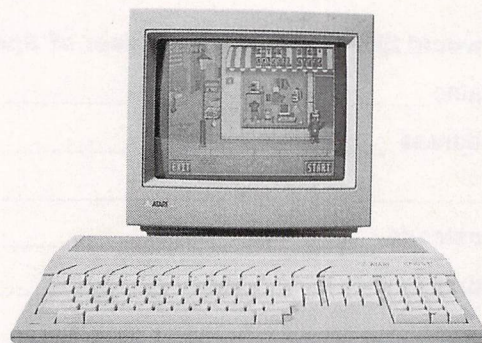
Spec Code is Shareware – if you make use of it the author would rather like to see the colour of your money, the colour of £15 to be exact. In return for registering your copy, you get a fresh copy of *Spec Code Plus* which enables you to use keyboard, text and window commands while displaying a *Spectrum 512* picture. With *Spec Code* your colourful creations are no longer confined to slideshows, now they can run riot through your *STOS Basic* programs, brilliant. If you're already using *Spec Code* you will receive *Spec Plus* free of charge now that *Spec Code* has passed into the Shareware Domain. Turn to page 19 and fill out the coupon to make the most of this offer.



ATARI REPAIRS JUST £49.95 inc.



- ★ Atari registered
- ★ Over 10 years experience with Atari computers
- ★ 20 qualified technician engineers at your disposal
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- ★ Some computers can be repaired within 24 hours of booking in.
- ★ Prices include full service check, overhaul, soak-test and replacement of power supply unit if necessary
- ★ Repairs to keyboard and disk drive also included (£25 extra if these units are unrepairable and require complete replacements)
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Upgrade the operating system of your Atari 520 ST (FM) to that of the more advanced Mega ST computers. We can supply and fit the TOS 1.4 operating system to your computer increasing its overall performance by approximately 20% and disk accessing speed by 30%. Also gives MSDOS data compatibility

SPECIAL EXCLUSIVE OFFER:

All this can be yours if you submit your computer to ourselves for repair, enclosing this advert along with just an additional £25.00 we will supply and fit TOS 1.4 operating system at no extra cost!

How to take advantage of this exceptional offer: simply send or hand deliver your machine to the workshop address detailed right, enclosing payment and this advert, and we will do the rest. (Important, please include a daytime telephone number and fault description).

* If you require 24 hour courier to your door, please add £5 else your computer will be sent back by contract parcel post.

WTS ELECTRONICS LTD
STUDIO MASTER HOUSE
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Telephone (0582) 491949 - (4 lines)

WTS reserve the right to refuse machines that in our opinion are tampered with, to an extent beyond reasonable repair.

MEMORY UPGRADES

HCS STE and MEGA STE UPGRADES

HCS STE memory upgrade kits come complete with full instructions designed for the novice. The complete job should take no longer than 15 minutes. 2 and 4 megabyte kits come with free utilities disk and multitasking software.

Upgrade from 520 to 1040	£13.99
To 2 Megabytes	£49.99
To 4 Megabytes	£94.99

STF (M) and Mega ST upgrade kits

Xtraram Deluxe plug in upgrading system fits inside the computer. It can upgrade your computer in stages to 1Mb, 2.5Mb* and 4Mb. The kit comes with comprehensive instructions designed for novices. The kit uses SIMMS, so is easily upgradeable.

MARPET XTRARAM <i>Deluxe</i> QUALITY SIMM UPGRADING SYSTEM	
Formerly Frontier	
Upgrade from 520 to 1040	£44.99
To 2.5 Megabytes.....	£79.99
To 4 Megabytes.....	£119.99

Solder in Kit

The solder in kit will upgrade the 520ST to 1Mb. Electronics experience is required as much soldering is needed. Check your RAM chip configuration before ordering: 4 or 16 chips, SMD or DIL.

Solder in kit (all versions)	£25.00
------------------------------------	--------

REPLACEMENTS

The HCS power supply and disk drive upgrades come complete with fitting instructions and plug straight into the ST without soldering. The Power supply produces less heat than the original so is more reliable.

Replacement power supply	£39.95
Double sided disk drive kit	£47.00

ACCELERATORS

The AD speed made by ICD fits in place of your microprocessor. It uses a 68000 chip running at a switch able 16Mhz with cache or standard 8Mhz to give virtually 100% compatibility. The 68030 SST for the Mega ST gives phenomenal speed with a 68030 running at 50Mhz! The SST has space for 8Mb on board RAM, TOS2 included.

AD Speed ST	£145.00
AD Speed STE.....	£165.00
68030 SST - 50.....	£550.00
Fitting for above	£35.00

INTERFACES

The "AdSCSI" ICD host adapter gives SCSI output from the STs DMA port, complete with software and full documentation, DMA cable and hard drive formatting software. Multirez allows the ST to display all 3 ST resolutions on the multisync monitor. The forget me clock sets your STs time and date, with cartridge through port. Keyboard interface allows the use of external PC compatible keyboards on the ST.

AD SCSI.....	£69.99
AD SCSI Plus (with clock)	£79.99
Keyboard Interface	£55.00
Multirez	£44.99
Forget Me Clock.....	£16.99

ATARI MEMORY UPGRADE SPECIALISTS

MONITORS

14" super high resolution 0.28 dot pitch Multisync monitor is compatible with the TT, PC VGA/SVGA and Multirez and proposed Falcon output. SM144 is compatible with all monochrome ST software, all normal controls at the front. Both have picture size and position adjustment.

Multisync colour monitor	£280.00
SM144 14" FST Monochrome	£115.00

MODEMS

HCS Smart Modem 9600 has full FAX capability for send and receive. Auto-answer, pulse or tone dial, automatically determines incoming calls as fax or modem, industry standard command set with support for V22bis, V22, V21. Fully Hayes compatible. All types c/w PC software. ST fax software option supports most ST graphics formats including Pagestream and Calamus for immediate composition and send. Modem 2400 has all above features but without fax. All types come complete with cables.

Smart One TM Fax with ST FAX software	£139.99
Smart One TM Fax with only PC software.....	£119.99
Straight Fax software	£45.00
Smart One TM 2400.....	£59.99

PROTAR HARD DRIVES

Progate II 20.....	£220.00
Progate 30.....	£249.00
Progate II 50DC	£349.00
Progate II 100DC.....	£449.00

The Vortex 386 emulator runs at 16Mhz and allows true multitasking in PC mode on the ST. Space on board is provided for a 387 CO Processor and 512K of FASTRAM. Norton factor 15!

VORTEX 386 SX-16.....	£330.00
387 CO-PROCESSOR.....	£117.00
FASTRAM CACHE	£30.00

SPECTRE GCR MAC EMULATOR

Spectre GCR cartridge gives 20% more speed and 30% bigger screen area on the standard ST. Compatible with the TT.

SPECTRE GCR (Inc. 128K Roms).....	£300.00
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Atari TT2	£1050.00
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Fax/Call on (081) 777 0751
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Croydon CR0 8RJ



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Evesham, Worcs. WR11 6XJ



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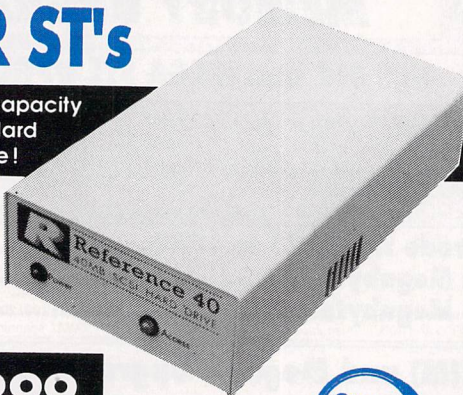
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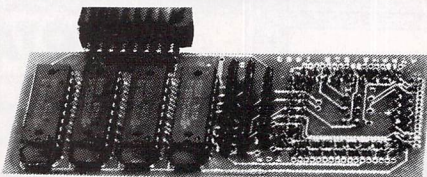
Our units incorporate latest technology, high capacity
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40MB VERSION £299
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PLUG-IN, SOLDERLESS 512K UPGRADE FOR MOST 520ST COMPUTERS



**With our compact plug-in
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can expand the memory
of your 520 ST to 1Mb,
quickly and cheaply!**

- Neat & compact design • Quick 'plug-in' style installation procedure • Simple, fast and effective RAM upgrade path
 - Designed to fit almost any model of 520 ST • Requires no soldering or special technical know-how
- Please note: Not suitable for STE machines

ONLY £49.95
including VAT & Delivery

N.B. Due to the large variance in design of the Atari ST, there is a small minority of boards in existence which may require a little soldering.

ATARI STE RAM UPGRADES



520STE 1Mb upgrade (2x256k SIMMS)	£ 30.00
520/1040 STE 2Mb upgrade (2x1Mb SIMMS)	£ 60.00
520/1040 STE 4Mb upgrade (4x1Mb SIMMS)	£ 120.00
520STFM 1Mb RAM Upgrade kit, requires soldering	£ 49.00
520STFM 1Mb RAM Upgrade, fitted by ourselves	£ 79.00
Mega ST2 4Mb RAM Upgrade, fitted by ourselves	£ 149.00
520STFM 1Mb Internal Drive upgrade kit, with full fitting instructions. Requires very slight case modification	£ 49.95

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Our fully equipped service department is ready to
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We can offer fixed price repairs on any ST computer. Our price include return postage and covers any fault occurring in normal use, including drive problems. We reserve the right to refuse any machine that we consider to have been damaged other than in normal use, eg. substandard repair work, lightning and physical damage - these are quoted for separately.

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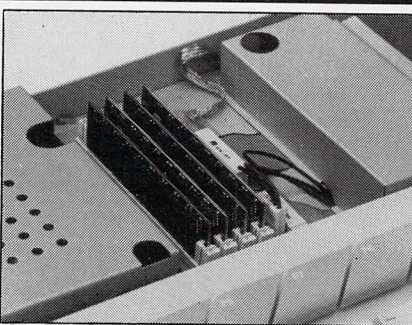
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- ✓ Uses SIMMS RAM Modules for Effortless Upgradeability
- ✓ Probably the neatest ST RAM Upgrade available!

Upgrade the memory of your ST quickly and easily with our fully compatible RAM upgrade board. Designed for pre-STE machines, the unit accepts SIMMS slot-in memory modules, making RAM fitting simplicity itself. No electronics knowledge needed! Available with or without RAM modules. Allows upgrade in stages of 1Mb, 2 / 2.5Mb and 4Mb, as and when necessary. Straightforward installation - full, step-by-step comprehensive instructions provided. (Please note that the ST must be fitted with a double-sided drive for proper installation.)



Upgrade unit with board unpopulated..... £ 44.95

Upgrade unit with 512K RAM Installed -
upgrades a 520 to a total of 1Mb RAM..... £ 74.95

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upgrades a 520/1040/Mega ST to 4Mb..... £199.95

N.B. Due to the large variance in design of the Atari ST, there is a small minority of boards in existence which may require a little soldering.

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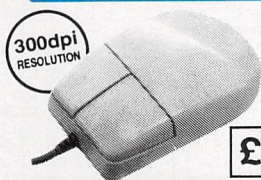


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GOLDEN IMAGE OPTICAL MOUSE

ST/Amiga compatible - excellent travel & accuracy assured. **NEW LOWER PRICE!** £29.00

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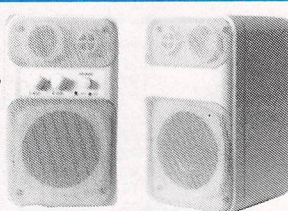


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Enjoy quality stereo sound reproduction to the full with this great Twin Speaker System! Features built-in amplifier with adjustable V/R volume controls. Runs from PSU (supplied) or from batteries (not included).

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ATARI



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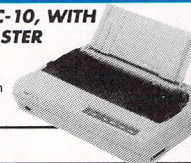
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Beware of other makes of drive that take their power from the joystick port !

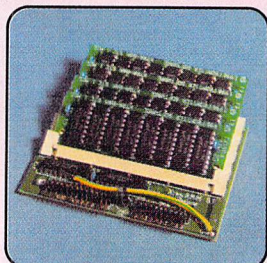
Also available:
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Xtra-RAM Deluxe



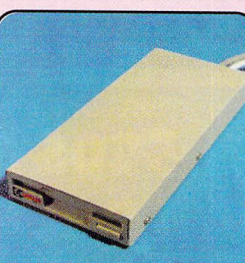
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- Unpopulated.....**\$34.99**
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- Clock cartridge with full pass through port
- Sets system & keyboard clocks every time you turn on or reset your ST
- Two year guarantee - including battery
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The official ATARI UK TOS 2.06 is supplied on a board allowing you to keep your existing ROMS giving compatibility with existing and future software. The board is also designed to be used as an ST-E adaptor for either AT-Speed or ATonce. ST-E models only.

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Citizen Pro Jet	\$394.99	Replay Professional	\$69.99
Star LC-20	\$139.99	Replay Stereo	\$64.99
Star LC24-20	\$199.99	Naksha Mouse	\$24.99
Star LC-200 Colour	\$199.99	Golden Image Mouse	\$19.99
Star LC24-200	\$224.99	Universal Monitor Stand	\$11.99
Star LC24-200 Colour	\$274.99	Universal Printer Stand	\$6.99
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Goods are not offered on a trial basis. Goods are offered subject to our conditions of sale.



● New Atari family ● Autumn release planned for *Elite 2* ● £20,000 up for grabs ● CD ROM support for ST

SHORTIES

● Brother Business Machines have reduced the prices of their three most popular laser printers, the HL-8V, HL-8PS and HL-4PS. The list price of the HL-8V falls from £1,749 to £1,649. For your money you get an 8ppm (pages per minute) printer with HP PCL 5, enhanced to give you 64 grey-scales for high-quality graphics printing as well as high res control to smooth jagged edges on characters and graphics.

The HL-8PS and HL-4PS can emulate the PostScript™ language so are ideal for DTP purposes. The HL-8PS has been reduced to £2,199 from £2,495 and has a user-friendly LCD control panel. It also has a 2MBytes memory upgradeable to 6MBytes. Meanwhile, the 4ppm HL-4PS has been reduced by £100 to £1,699 and also features a 2MByte upgradeable memory. For further information call ☎ 061 330 6531.

● If you've got a PC and find that the available software doesn't match up to your expectations, suffer no longer. There's now a plug-in expansion card so you can run ST software on 386 and 486 PCs. The card, the Gemulator, emulates the ST's hardware so you can run packages like *Calamus* and *PageStream* on your PC. Because the card has room for two sets of TOS chips, both TOS 2.06 and 1.6 ROMs can be installed ensuring full software compatibility. TOS ROMs are not included in the price of the board which is £220 (£399).

Contact Branch Always Software at 14150 NE 20th Street, Suite 302, Bellevue, WA 98007 USA or fax them on 0101 206 885 5893.

● Ladbrokes have reduced the price of the SIMMs memory modules you need if you want to upgrade your STE or Mega STE, and also the price of STFMs with SIMMs adaptor boards. An upgrade from 0.5MByte to 1MByte for the STE costs £13.99 down from £15.99, two 1MByte SIMMs cost £49.99 – down by £10 and four 1MByte SIMMs are down to £94.99 – a reduction of £20.

The JIN Mouse, an opto mechanical mouse with a 290 dpi resolution, is also reduced in price and now costs £9.99 from £12.98.

Call Ladbrokes on ☎ 0772 203166.

● External 1.44MByte High Density floppy drives for the Mega STE and TT are now available – previously you could only get 720K external drives for these machines. They come from Gasteiner for £99 and plug directly into the external floppy drive port.

Gasteiner are on ☎ 081 365 1151.

Official: Falcon basis of new Atari range

by Andy Hutchinson

Falcon, Atari's latest computer and replacement for the ST, is to be the basis of a new range of machines. At a preview of the Falcon, Bob Gleadow, managing director of Atari UK, told *ST FORMAT*: "There's no doubt that this is the start of a family of machines."

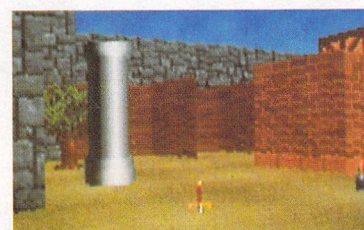
Falcon is a revolutionary machine which will be seen publicly for the first time at the show in Dusseldorf, Germany. Atari intend to launch the machine across the EEC along with a range of software and hardware specially developed for it. They have also signalled their intention to push the games platform as well as emphasising the all-purpose nature of the new machine. Given the flexibility of the Falcon it's very likely that a variety of specifications will be released with greater memory and internal hard drives.

Gleadow realises that a computer is only as powerful as the software you run on it, or in his words, "Until you wrap the software around it, it's just a box." So, what kind of software are we likely to see for it? "Initially we're aiming at the dedicated ST owner, so the first software releases will be compatible with both ST and Falcon." But would this encourage people to buy the new computer – after all, if the software looks exactly like an ST's, where's the hook? Gleadow said: "It's essential to

get games which look and sound much better than anything else." The general intention, it transpired, is to release software that can create a real buzz of excitement. Given the fact that Falcon can be connected to CD drives, is there going to be any interactive CD software? The answer is, yes – but not yet.

Gleadow isn't too impressed with the Philips CD-I hardware – he thinks Atari can and will do much better. He also believes that CD isn't going to be terribly significant until 1993. Gleadow wants Falcon's CD system to be capable of real full motion video – this would put it at the forefront of CD based computers. To cope with the practicalities of this, Falcon has sockets for J-Peg and N-Peg chips which can decompress CD data at enormous speeds. The 1993 time frame for CD software would also coincide with the arrival of *Seven Guests*, a CD-Interactive game being developed by Virgin USA that's hailed as one of the most significant computer games ever.

Of course, these developments cast a shadow over the existing ST

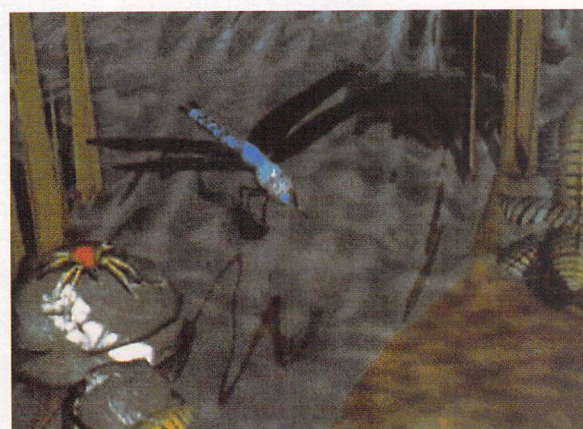


● Fast, detailed, gorgeous colours are possible on Falcon, just like this Super VGA PC grab, only more so.

range. Atari tell us they've no intention of reducing the price of these computers – Gleadow didn't feel that a further reduction in the price would increase sales, similarly he doesn't feel that Falcon's release will damage sales of the ST range. They are, he feels, for different people – the Mega STE, for instance, is "a great, cheap DTP system," while Falcon is a real consumer product in the same way that a video recorder or TV is.

With Atari promising the release of plenty of technical information on Falcon, the establishment of a dealer network at the Electronic Consumer Trade Show in September as well as a massive advertising spend throughout the media, all the signs are rather good. All that's needed now is the execution to back it up.

● Turn to page 50 for the lowdown on what we saw at the Falcon preview.



● Atari couldn't do much better than to release *Legends of Valour* on the Falcon. Its 24bit graphics would look as stunning as this on Atari's latest and greatest machine.

SUBSCRIBE NOW! TURN TO PAGE 40 FOR DETAILS

Elite 2 set for November release

by Andy Lowe

The official sequel to the 1983 space-trading game, *Elite*, is soon to be released on the ST. Konami's Dave Braben co-wrote the original with fellow Cambridge undergraduate Ian Bell, but has, this time, faced the four year project alone. *Elite 2* (which is only a working title) is pencilled in for ST release in early November and boasts a series of features which should send it soaring above all the original's imitators in every area.

Braben has been working on the project since 1988, initially using 8-bit machines, until it became obvious that their technology could not match his ambitions for the game.

Elite 2 is to make full use of the Mega STE's 4,096 colour palette to enhance the depiction of the galaxy – this Galaxy – mapped, with meticulous detail, within. The original *Elite* was, effectively, the first ever 3D game and featured 2,000 worlds set around eight fictional galaxies. *Elite 2* promises an astonishing 70,000 light years of area, involving roughly 100 thousand million worlds!

Much of the original's gameplay has survived, with the player taking on

the role of a mercenary space-trader, procuring a living as best he can, having to deal with aliens, pirates and other such harbingers of unpleasant interstellar menace.

US Gold poised

● "Perhaps you'd care for a room, sir?" An unsavoury piece of slime, er, sorry - the landlord offers you accommodation in the city of Mitteldorf.

● Before the king of Mitteldorf, who is rather bored and so tends not to hesitate in dishing out tedious things like fines and stretches in dungeons.

● Spoiling for a fight with a rather burly werewolf. Could be a mistake? Well, after one or two vats of ale, these things just seem to happen...



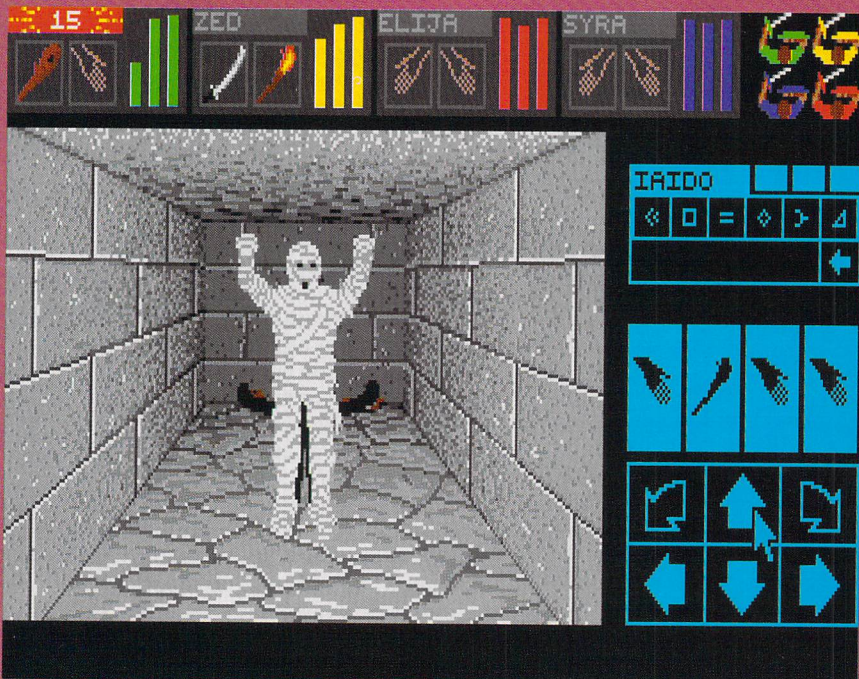
US Gold are going to be offering the role-playing world two important new titles, one of which looks set to diversify the nature of RPG fans' expectations of the genre.

Blade of Destiny is going to be the first in the planned series of *Realms of Arkania* based on the extremely popular German board games *Das Schwarze Auge*. It is being developed in close association with Fantasy Productions – the original authors of the series.

Blade of Destiny includes character archetypes representing a variety of races, cultural backgrounds and professions. They all need seven different attributes – Courage, Wisdom, just a bit of Intu-

DOUBLE ADVENTURING

● Psygnosis have acquired the rights to the benchmark RPG games *Dungeon Master* and *Chaos Strikes Back*, following the sinking of Mirrorsoft. They are on sale as a twin pack for £25.99. Contact Psygnosis on ☎ 051 709 575.



● Wallow in a bit of nostalgia with the game that launched a hundred

others. Everybody from US Gold to Virgin have tried to emulate *Dungeon Master's* success, but few have come close to creating a game as playable and addictive as FTL's original romp in the sewers.

to release RPG

ition, Charisma, Dexterity, Agility and Strength – as well as being affected by such “negative” attributes as Greed, Superstition, Fear and Phobia. The combat system is modular and enables the player to utilise a variety of fighting skills while taking part in detailed battles involving feints, critical hits and called attacks.

The second release, *Legends of Valour*, is designed by Kevin Bulmer, who was responsible for *Corporation* and offers overlooked innovations which will leave many RPG games looking staid and humourless by comparison.

Legends of Valour enables you to exist and interact within a true “virtual world,” in which a desired lifestyle and career path can be pursued, leaving open opportunities to indulge in gambling (cockroach racing being the most popular form), trading (and mugging), drinking (one too many and the terrain starts to sway quite violently), fighting (plenty of skulls wander around, ripe for cleaving), working (yes, you can earn money too!) and other, as of yet, unexplained and ubiquitous quest-aspects.

The game features a unique graphics engine enabling convincing (and fast) smooth scrolling from

a shaded, texture-mapped 3D perspective – and if that sounds rather turgid and technical, then check out the screen-shots below and, instead of imagining yourself taking giant, cumbersome steps and turning around in enormous chunks, think smooth! Both games are set for late October, early November release. For more information, contact US Gold on ☎ 021 625 3366.

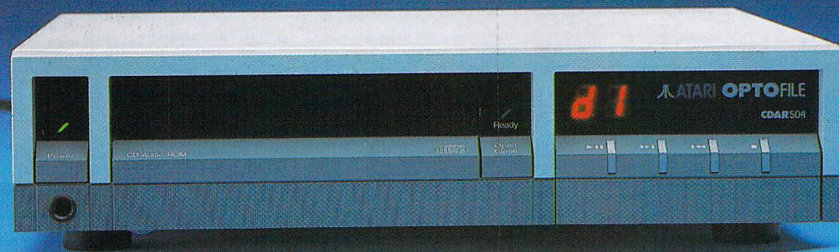
But US Gold aren't always doing the right thing – *Flashback*, a platform game like *Prince of Persia* but programmed by Delphine Software, is apparently not to be released on the ST. So – complain! Write to: US Gold, Units 2/3, Holford Way, Holford, Birmingham B67AX or the software house – Delphine Software, 150 Boulevard Haussmann, 75008, Paris, France.

● Some of the eager quest-obsessed eccentrics in *Blade of Destiny*, the first in the *Realms of Arcania* series.



CD-ROM support for ST

● Atari have been developing CD devices for years already. This is the CDAR-504 CD-ROM, it was replaced by the CDAR-505 and no doubt that will be replaced by a sexy Falcon CD add-on some time next year.



Most SCSI (Small Computer Systems Interface) and SCSI-2 devices – including CD-ROMs and optical drives – can now be connected to the ST following the release of the Link, an external SCSI host adaptor. It means that any standard external SCSI drive designed for the Apple Macintosh, PC compatibles, TT and NeXT machines can be plugged in and used by the ST. Because the SCSI drive does not have to be opened or tampered with, new SCSI drives can be connected to STs without voiding the guaran-

tee. Along with the supplied MetaDOS drivers, the extended SCSI command set is implemented so that you can have ST support for the SCSI-2 standard used by CD-ROM players.

Floptical and magneto-optical drives can also be used by STs, along with virtually all Read/Write optical drives in 3.5 and 5.25 inch formats. If you have an MS-DOS SCSI drive which has been formatted with Fdisk, you can now connect it to an ST and be able to read and write the data

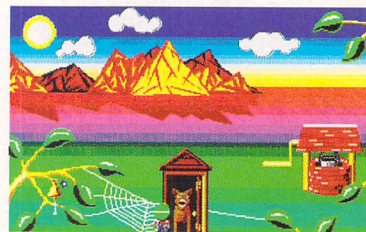
on the drive from the ST under TOS. The Link is a switch from a traditional internal host adaptor and mounted inside a hard drive case – it plugs into the DMA port of the ST and the standard 50-way SCSI connector of the hard drive. The unit is a tiny device: 70mm by 84mm and just 21mm thick – it does not require an external power supply because it takes its power from the SCSI device connection.

You can get hold of the Link from Gasteiner for £59. Call them on ☎ 081 365 1151.

£20,000 COMPUTER GAME CHALLENGE

Future Publishing – the company behind *ST FORMAT* – are organising Britain's first full-scale National Computer Games Championships and are putting up an incredible total of £20,000 in prize money.

All *ST FORMAT*, *PC FORMAT*, *Amiga Format*, *Amiga Power*, *Total*, *Sega Power*, and *Commodore Format* game-players can compete in regional heats taking place in



● **Wizkid** scored a huge 92% when we reviewed it in issue 37. Its originality, addictiveness and speed make it a perfect choice for this competition, so get practising – you could be a winner!

October. Readers of the soon-to-be launched *Super Play* and *Mega* magazines may also enter. Regional winners are then to go on to the Finals at the Future Entertainment Show a month later.

The Finals are to feature two contestants at a time battling it out in a series of sudden death playoffs in front of a video wall. The Grand Final – to be televised by



● **Parasol Stars**, the highly addictive umbrella-'em-up achieved a *FORMAT* Gold last issue, and is one of the two main contenders for you to play in the ST competition.

ITV as part of a new 13-week series about computer gaming – will see the champions, from the featured computer and console formats, playing against each other for a first prize of £10,000. There is also a second prize of £4,000 and six runners-up will receive £1,000 each.

The Future Entertainment Show is expected to attract 100,000 visitors to Earl's Court making it one of the UK's largest consumer exhibitions. Some of the major exhibitors include Domark, Electronic Arts, Gremlin Graphics, MicroProse, Silica and Virgin Retail, so the show will have some of the hottest hardware and software in the computer entertainment industry on display. The Future Entertainment Show begins on Thursday 5 November 1992 and finishes on Sunday 8 November 1992.

The games being played during the competition are still a closely-guarded secret, although we expect that there'll be one major game from each computer and console format.

ANIMASTER

Because of a misunderstanding in issue 37, we unfortunately printed some incorrect details on the coupon for the purchase of the *Animaster* v3.4 package. So, the correct information in full:

You should send your name, address and telephone number to Barrie Capel, 186 Holland Street, Crewe, Cheshire CW1 3SJ. He would also like the correct payment of £4.99 in cheque or postal order form only. Please could you make cheques and POs payable to Home Grown Artworks. Any enquiries should be made on ☎ 0270 212653

MORE THAN A SCANNER...

Naksha UK, producers of the best-selling Naksha Mouse, have launched a hand-held scanner package – the Image Scanner Mk 2 – for the ST. For £116.33 you can create high-quality scanned images that you can use in newsletters, reports and brochures. The package includes interface, power supply, *Touch-Up* software from Migraph™ and a voucher for the purchase of an OCR (Optical Character Reader), so you can edit your artwork.

The Image Scanner Mk 2 features 200-400dpi adjustable resolution and four zoom modes (fit to screen; 100%; 200%; 400%) with an on-screen locator which indicates your position under zoom conditions. Other features include on-screen display during scanning and conversion of dithered images to greyscale. You can also load or save images in a variety of formats including Degas, GIF, MacPaint, PrintMaster, PCX and TIF. This provides you with access to a wide variety of clip art libraries by enabling you to

load popular formats from other computers and save them in your own preferred format. Colour files can also be converted to mono.

User-friendly scanning controls enable you to exercise total editorial control over your scanned image – there are scalable fonts through to full painting and drawing functions. There are also special effects such as flip, mirror, slant, stretch and distort. The image editor includes brushes enabling you to do anything from a simple sketch to a Bezier curve. There is also a Clean-Up tool that automatically eliminates stray black or white dots from the image. Additionally, *Touch-Up*'s "Virtual Page" function means you can scan work larger than screen size.

The Atari scanner is compatible with the 520ST, 520STFM, 1040ST, 1040STFM and all STE Models. Minimum 1MByte RAM, hard drive recommended. For further information you should contact Naksha on ☎ 0925 56398.

● Import real images into your ST with the Naksha Scanner bundle.



SWEETIES

● Star Micronics have a speedy addition to their ever expanding range of printers, the LaserPrinter 4 v3, which they claim is the fastest laser printer on the market. Fully HP 3 compatible and using resolution enhancing technology, the printer uses an Intel 80960SA RISC processor running at 16MHz which cuts the processing speed of page information by half. Supplied with 1MByte of memory as standard and a plethora of internal fonts and typefaces, the LaserPrinter 4 costs £1,232.58. Contact Star Micronics on ☎ 0895 252131.

● Spectre GCR Printer drivers will soon be available so if you have a Mac emulator you can print out your copy at home rather than carry disks back and forth to your office Mac. There are to be three sets of drivers, the 9-pin printer set for £49.99, the set catering for 24-pin machines will be £79.95 and the set enabling the Canon BJ10e, the HP LaserJet, the HP Deskjet and other laser and inkjet printers to be used will cost £149.99. HCS are on ☎ 081 777 0751.

● You can get a 2400 baud modem for £59.99 from HCS inclusive of all leads, manual and power supply. Included with the modem is a "get you started sheet" for newcomers to comms on the ST. HCS are also throwing in the Uniterm PD comms package as part of the deal. Ring HCS on ☎ 081 777 0751 to get a jump start into the world of comms.

● Ladbroke Computing International are distributing *Silhouette*, a US bit-image and vector graphics package including auto-tracing. Auto-tracing is a method of converting bitmapped images to vector graphics, which, unlike bitmap images, can be enlarged to any size without losing resolution. Other features of the package include Bezier curves, B-splines and high resolution grey scales. You can import file formats including IMG, Degas, Tiny, MacPaint, IMG and SGF. Export options are GEM, IMG, SGF, DFX and EPS (Postscript). *Silhouette* costs £60, call Ladbroke on ☎ 0772 203166. *Scanlite*, a Desk Accessory which enables you to scan directly into third party programs like *Silhouette* if you have a Golden Image Hand, Migraph, Daatascan and Geniscan hand scanner is also available for £20 from Ladbroke Computing.

● CIX (Compulink Information eXchange) have added a new service for those that can afford a CIX account – FaxMail. By adding commands to the top of a text document and selecting the "mail to faxmachine" option from the main menu, you can upload a file in the normal way to fax it. Prices are a moderate 30p for the UK, 70p for Europe and £1.75 for everyone else. For information while on-line type "help fax" or phone CIX on ☎ 0492 641 961.

POWER COMPUTING

Atari ST Power Scanner



Following the huge success of the Amiga Power Scanner, we have been hard at work to produce a product of the same high quality for the Atari ST, and are proud to present the new Atari ST Power Scanner.

This compact unit plugs into the Atari cartridge port and allows scans to be taken at up to 400dpi using the supplied M105-PLUS hand scanning head.

The unit is supplied with the 'PowerScan ST' software-a powerful and user-friendly utility boasting features normally only found on far more expensive products including:

- | | |
|--|--|
| Auto scan rate detect | Works in all three resolutions |
| Real time greyscale scanning | Save in a variety of picture file formats |
| Monochrome text or 16 greyscale levels | High resolution printer driver with more drivers forthcoming |
| Full image and clipboard editing features | GEM menu and fast icon driven controls |
| Scan join feature for taking wide scans | Keyboard shortcuts |
| Cut, paste, magnify, flip, rotate, invert, crop, edit and many more editing features | OCR text recognition coming soon |

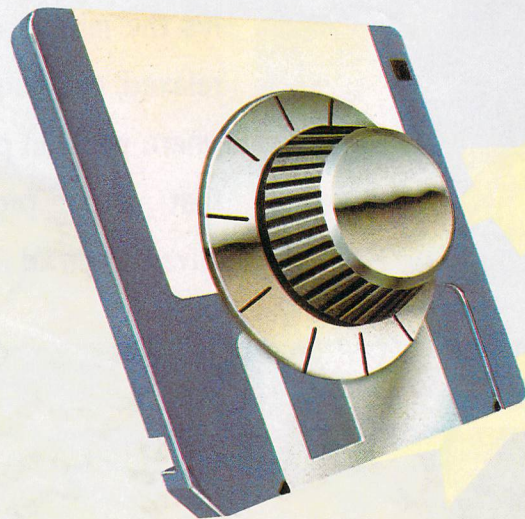
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The Ultimate Cartridge



The Ultimate Cartridge will break into any Atari ST program. Whether you're programmer, hacker, games player, or just curious about your Atari ST, The Ultimate Cartridge gives you the power that you need. Updates available with new software.

- | | |
|-------------------------------|-------------------------------|
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| Read memory | Low level disk editor |
| Search memory | Disk analyser |
| Print memory | Examine formats |
| Disassemble | Format analyser |
| Disassemble to disk | File editor |
| Edit memory | Directory editor |
| Search for graphics | Formatter |
| Search for sprites | Break and restart function |
| Edit screen configurations | Search for infinite lives |
| Set up colour palettes | Look for music |
| Alter plane configurations | Play music |
| Load and save screen displays | Load and save music |
| Run external TOS programs | Search for soundtracker music |
| Load TOS programs | Search for sound samples |

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Summer school



It's the middle of the year and the sun's blazing down, you're on holiday, you're relaxed, and you've got all that spare time – those long evenings and early mornings where you can play with your ST. And there are so many things you can do with it that you've probably never even tried... Now's your chance as Chris Lloyd, Clive Parker, Ed Ricketts, Andy Hutchinson, Neil Jackson and Chris Ankin discover

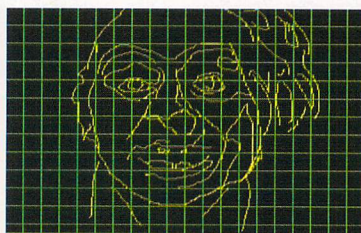
1 Pretty as a picture



● Who wants those endless pictures of Porsches? That's much more like it – see? Your ST is perfect for those abstract compositions. Let your hair down, get your imagination out of its box and experiment. Remember to save often, though, just in case an effect goes wrong and leaves your screen a tangled mess.

What better way is there to relax than to throw pixels about and piece together a work of art that has people spinning, and saying: "Phew! What a piece of art that is." On Cover Disk 34 lurked the brilliant art program *Canvas*. It runs in all resolutions and has (approximately) a squillion features, so it's ideal for all your artistic ambitions. There is no sub-

stitute for hard work here, a good piece takes time and patience, so don't expect to knock a couple of masterpieces out after lunch. Think about the subject – popular ideas soon get boring. Copying something is an easy way to start because you know what you're aiming for, although the result tends to look "copied." Artists on the ST often try and make their pictures look as real-



● The easy way – take a photograph or picture, draw a grid over it and match it up on your ST's screen then copy the outline. This means all the proportions are correct and you've a good head start. Drawing freehand takes quite a bit of practice – not to say skill.



● When you've sussed the composition and outline of your main elements, it's time to add detail. Fill in your outline with solid blocks of colour to give you an approximation of the final picture. Your next job is to move in with the zoom and add the fine detail.

2 How to become a star

If you have *Sequencer One* from Cover Disk 30 and a MIDI keyboard, you have the physical capability to create chart-topping music. Follow these steps to see how it's done...

For an easy start, work on the rhythm section first. You can get a simple four-bar drum pattern using the Step Editor Screen's Keyboard icon to give precise beats. The best way is to record your rhythm live and use the quantize function to tighten up the timing afterwards.

Plug in your MIDI keyboard and set it to receive MIDI on the channel you're using for percussion. Switch *Sequencer One* into the Step Editor Screen and set the end position to 5:01 for a four-bar riff. Click on Loop and Limit to make

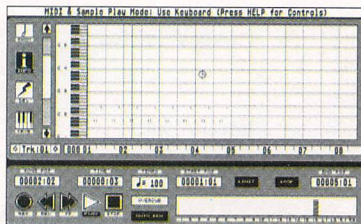
the sequence repeat until you get the rhythm right. Press <Enter> to start recording and then tap in your percussion track for four bars. Hit the Spacebar when you're done.

The next step is to add a bass riff. Return to the Track List Screen and name track one to "percussion" or something. Select track two by clicking on the space just below the dot, and then move into the Step Editor Screen again. Set up your keyboard to make a bass sound and play a sequence of chord changes to match your four-bar rhythm.

Use the Spacebar to play the rhythm track so that you can play your chords over the top until you have a sequence you feel happy with. Hit <Enter> to begin the recording and hit

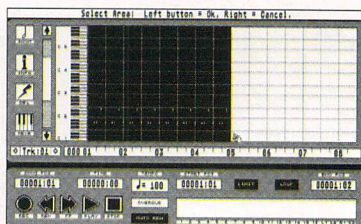
the Spacebar again to punch out when you've finished.

Once you've got a short riff which loops cleanly, you can use the block editing functions to cut and paste copies of it, one after the other. Go to the Step Editor Screen and click on Select All from the Block menu. This makes any editing function affect all tracks, not just the current one. Use a



● Get yourself a simple drum pattern...

zoom level which enables you to see all the notes in your sequence and then click near the left edge of the grid, just to the right of the vertical keyboard. This tags the first notes. Move the mouse to the right and the grid turns black as you move. When you get to the end of your notes, click the left button again to mark off your riff. Use Cut in the Block menu to move your riff into



● And prepare it for a four-bar riff.

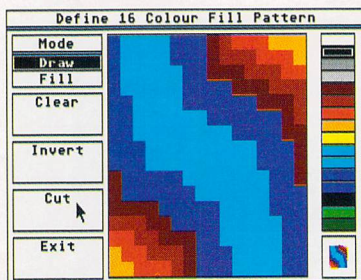
Let's face it, getting to know your ST a bit better probably isn't at the top of your list of priorities. It comes under the same category as painting the living room, fixing that leaky tap, mending the fence and learning Sanskrit – the "I'll do it tomorrow" file. Now's your chance to make tomorrow come that bit sooner.

On the pages following this introduction are lots of projects for you to try out, most of them using programs from STF's Cover Disks, so you don't have to shell out for new software. Of course, if you missed the issue with the program you want to use on it, you should turn to page 40 to order your back copy. The projects range from the practical to the frivolous, from the easy to the advanced, from the creative to the practical. What they all have in common, however, is that they're merely starting points. Find something that takes your fancy and start experimenting. These aren't exhaustive step by step guides, more general direction signposts to point you in the right direction.

It's the summer now, so you should have at least a week on your hands in which you can settle down with *ST FORMAT*, a pile of *STF* Cover Disks and your ST and start mucking around – even if you've used all your holiday up, there are still the weekends. Once you start to delve a little deeper into a new aspect of your ST you're going to find whole new worlds opening up. From music to graphics, from cleaning to programming and from cataloguing to communicating, there's plenty of fun to be had. Try out all 15 projects and you can officially graduate from the *ST FORMAT* Summer School – even if you are still no wiser about Sanskrit.

istic as possible, which misses out on the point of using an ST. STs are ideal tools for abstract work – you can distort and merge images in strange and wonderful ways, then given them wacky colour schemes to produce interesting – if not rather weird – images.

Your most important first step is planning your palette. You've 16 colours to play with and it can be a real pain



● *Canvas* can define full colour fill patterns – they save you having to draw repetitive patterns or messing about cutting and pasting blocks. You can save your creations, too.

changing the colours halfway through a picture. Work out the main colours and pick the appropriate shades. Next, plan your composition. First, what are the main elements? Get an idea of the overall picture – don't just plonk the main bit over the top of a background – use the whole of the screen. Most of all, make sure you save frequently and don't be afraid to experiment, otherwise you're never going to learn new tricks. Now get that disk whirring, the imagination in gear and pixellate.

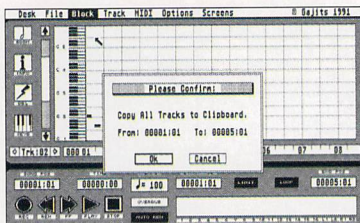
HINTETTES

- You can add the illusion of more colours using stippling – that is, a checkerboard pattern of two colours which gives the illusion of a third shade. *Canvas* has checkerboard patterns set up as fill patterns.
- Soften the edges between contrasting colours with an intermediate shade. The outline function is handy here.

the clip board, then use Paste. This asks for the start position and the number of copies; leave the start at 1:01, but enter 50 or so to make the track a few minutes long.

Now you have a longish tune you can use other tracks for melodies and counter melodies. Use the Step Editor Screen as before, setting the rhythm and bass to play, then play your

melodies over the top. You can create short riffs and paste them together as you did with the other tracks, but remember to turn off the Select All option or you mess up your rhythm track. The results may not be chart material until you've tweaked them a bit, but they are probably as good as anything Stock Aitken and Waterman ever did!



● Use Copy to lengthen the track...



● Then paste the whole lot together.



● Now the kids have left home I've lots of time on my hands. I find *STF* and the Summer School help fill my rather dull days.

3 We are family



Do you want to know about the origins of your family? Do you need to locate a long lost brother-in-law three times removed to tell him you've just had the pleasure of cutting him out of your will for that ancient misdeed? You do? Well then, what you need is a genealogy program, and a good place to start looking is the PD. While there are many demo versions, complete programs are pretty few and far between. The best available is called *Family Tree* from the ST Club (☎ 0602 410241) on Disk TMP.21 for £1.45.

Before you can start entering data, research your immediate family, finding dates of birth, places of birth and so on – and don't forget the deceased members of the family. If you can't find out these things just by talking to your relatives, go along to your local registry office where births, marriages and deaths are recorded. There are two excellent books available to help get you started in genealogy – *Discovering your Family Tree* (£2.95, ISBN: 085-263-7675) and *Tracing your Ancestors, The A-Z Guide* (£9.95, ISBN: 185-306-0852) both available from Waterstone's Bookstores. When you're confident with your findings, you can start collating them on your ST following these simple steps.

1 Select the New Person option from the Display menu and you see this form – enter names, dates of birth and other information. Remember to click on the question mark at the left of the family name box to designate the sex. If you do not indicate gender, you get problems with *Family Tree* when you want to record a couple's marriage.

2 Once you have entered a few members of the family into the system, you can link them together. Clive met Sally and they produced some kids – a few of them are listed here. To get here, click on Spouse from the New Person form. Clicking on the Children fields enables you to select the relevant offspring from the list of names.

3 Clicking on Edit Person from the Display menu enables you to see details of brothers and sisters along with other information like who the mother and father are. Clicking on the Further Notes option opens up a dialog box that acts as a notepad so you can store information like eating habits, religion and shoe size.

4 Here you can see the beginnings of a family tree with parents and a child. You can print out using GDOS or Epson configurations or to file. Once you've fill everyone in and cross referenced them all, you can do a printout and stare in wonder at the intricacies of family links. Then you can see why your young sister is the terror she is.

4

Demo wibbles

You've got STOS from last month's Cover Disk, right? And what you really want to do is make demos. Yeah, sure, you could spend weeks carefully constructing a game, but demos are what you're interested in – those wacky programs that do nothing but show off what a groovy programmer you are and what a vivid imagination you have. Take a look at a few demos and you see wibbly bits – lots of them. And there are all those sprites zooming about the screen in graceful curves. How's it all done, then? Well, there's no escaping a spot of maths using our old friend the sine wave – slip an equation into the sprite command and set up a little loop. Set things up with a blank screen then draw

a little sprite – the smaller it is the faster it can move – get your palette sorted and try this one. The `↓` symbol means no line return yet – the lines were just too long to fit in our narrow columns:

```
100 update off : x=0
120 sprite 1,160+(sin↓
x/20.0)*150,100,1
140 inc x : wait vbl : ↓
update
150 goto 120
```

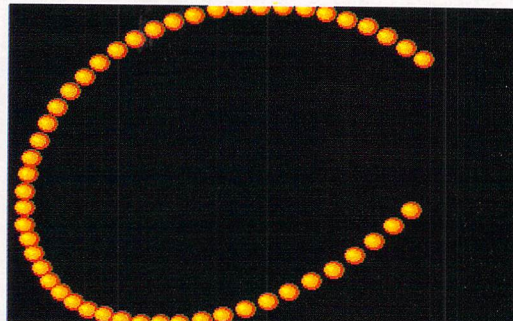
The STOS generated interrupt sprites are useful but aren't flexible or fast enough for most demo stuff, so it's ditched with the `update off` command. You move the sprite using the

update number whenever things are ready to be moved.

That sine calculation takes the variable `x` and produces a number from -1 to 1. `x` is increased every loop to take you through the full sine wave. The

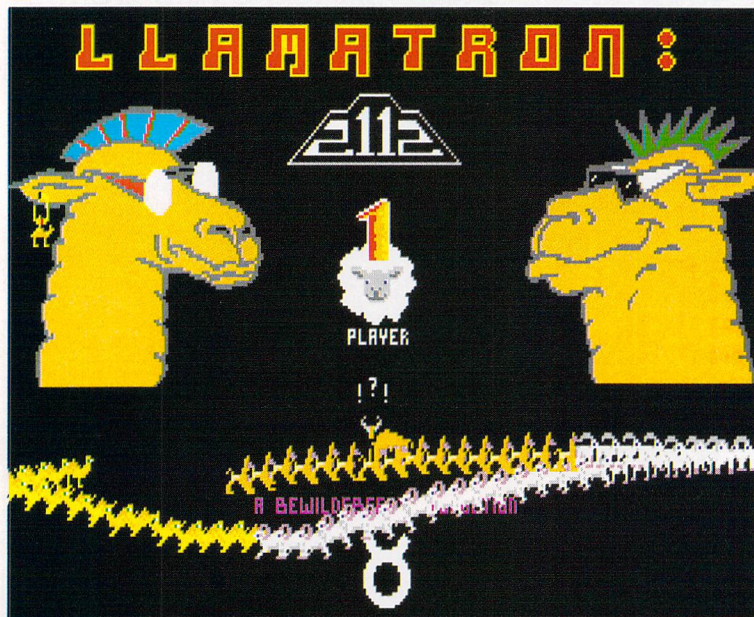
value is divided by a constant to set the frequency. Try altering the value 20.0 to see the effects. A number between -1 and 1 is little use because it's going to be a pixel offset, so the result is multiplied by 150. Your sprite should

● It's the old fave-rave – little balls doing the sine wave shuffle. With a trick or two STOS can create pretty speedy and impressive demos – and you don't have to suffer the three nights living on nerves and caffeine that machine coders thrive on.



5

Beat Llamatron!



● There are some things in life that make it all worthwhile. There's Fry and Laurie. There's Monty Python. And, of course, there's Llamatron. Rediscover it now and spend a happy hour or five trying to beat our scores – you haven't got a hope.



Have a quick flip through your collection of back issue Cover Disks. Stop at number 24. See what's on it? One of the best games ever, Llamatron. Long has the cry of a screaming Mandelbrot set been heard echoing around the FOR-MAT offices, and much is the work that

has been more than a little late because of this storming game.

So you think you're pretty good at it, do you? Think you're miles better than Jeff Minter, Llamatron's programmer? Perhaps you even think you're better than the STF crew. Prove it, if only to yourself. Here's what you've got to

WHAT THE MASTERS GOT

Jeff Minter:	approx 1.9 million, Level 60 (the second time around, that is!)
(Llamatron's fiendish creator)	
Ed Ricketts:	1,029,588, Level 84 (your humble servant and ex-STF Games Ed)
Maff Evans:	1,000,000, Level 60 (ex-STF writer)
James Leach:	approx 800,000, Level 70-odd (erstwhile games reviewer)
Neil Jackson:	approx 700,000, Level 70-odd (ex-STF Tech Ed)
Andy Hutchinson:	471,266, Level 52 (Editor)
Chris Lloyd:	413,390, Level 39 (Cover Disk Editor)

6

Clean machine



Don't you wish your ST was bright and shiny just as it was when you first got it out of its box? This is what you do – but first of all, make sure that your ST's over a year old before you take it apart or else you'll void the guarantee. What you need:

- Cotton buds
- Anti-static foam cleaner (Maplins £1.56 ☎ 0702 554161)
- Anti-static cloth
- A small cross-head screwdriver
- A large clear work area

To remove the keyboard from the case, ensure your machine is turned off, unplugged and disconnected from all peripherals. Turn your machine upside-down and remove the three screws at the front edge of the machine and the four screws along the back.

Carefully turn the machine over and remove the upper case. Now lift the keyboard free and unplug the connector to the main circuit board. Put your machine to one side and study your keyboard. If it is absolutely crusted with filth, you have to remove the key tops

from their posts, if it is not too bad then you can get away with cleaning between the keys. The key tops pop off with a little help – do not force them or

try to pull them off at an angle because you may snap the post. The Spacebar and the Return keys have a small metal rod underneath which can be awkward

DIRTY BALLS

The rollers inside your mouse could do with a clean as well. Remove the ball from the mouse and undo the two screws near the cable connection then carefully part the top and bottom sections. Once it's stripped down, clean the rollers with cotton buds dipped in foam cleaner. When it's finished, reassemble your mouse.



Treading the keyboards



The ST lends itself to any number of applications from word processing to games playing and it's easy to upgrade it so it performs better, but have you ever considered improving your own performance? Typing is just one of those things that it's easy to ignore completely, after all, it's a lot of bother to learn all those finger contortions when you could stick to the tried and tested two-finger method with your eyes set firmly on the keyboard.

If you use your ST for any word processing at all, you're wasting a considerable amount of time when you look to make sure you hit the right keys as you go along. No matter how proficient you've got using your two first fingers, you can save yourself a lot of time and effort by learning to touch type.

On this month's Cover Disk there's a program called Typing Tutor. This program leads you through the process of learning to touch type – that is, typing without looking at the keyboard and using all your fingers, even your little ones. Practise regularly and it won't be long before you can read text straight from a page and input it without even sneaking a glimpse at the keyboard out of the corner of your eye.

Once you've exhausted the lessons on the disk, open any book and pick a page at random. Try typing the page in, punctuation and all. Force yourself not to look at the keyboard, it's very easy to glance quickly at your fingers' positions, but you're not going to learn anything that way. Once you've typed in the page, go back and see how many mistakes you made. See if there's a key you consistently get wrong and return to Typing Tutor to practise it.

The Cover Disk typing program can assess your speed, so keep a record of your improving skills and see if you can get up to 75 wpm, a speed most secretaries work up to and beyond. Oh, and if you don't rate the program too highly, consider the options. You can inefficiently two-finger type for the rest of your life or you could, alternatively, spend a fortune paying some old man to drone words and phrases at you in an effort to make you coordinate finger movements and brain cells. It does happen – I did it.

appear in the centre of the screen and oscillate left and right. You want him to go up and down as well? Add a similar equation for the y axis using a different frequency to send your sprite wobbling his way across the screen. Try replacing the value 100 in your sprite command with `100+sin (x/17.0)*90`. One sprite looks alright, but a few more wouldn't go amiss. You can always add more sprites but this slows things down – a way round this is to cheat and reuse the one you've already drawn. Try adding:

```
90 logic=back
145 screen swap
```

This gives you two screens – switching

between the two preserves the image of your one sprite. Now it looks as if you've a zillion sprites on-screen at once. It soon ends up a mess, so you need some way of wiping the sprites out again. This is pretty clever – if you make a copy of your sprite in solid black, you can use him to block out your original. Add:

```
110 z=-100
130 sprite 2,160+sin(sinJ
z/20.0)*150,100+sin(z/17.0)J
*90,2
```

As if by magic you get yourself a spiffy train of sprites whizzing around in a lovely wibbly-wavy way like all the best demos – it's damned fast, too.

do – we here at STF challenge you to beat the scores set by our venerable selves, and of course the score of the master himself, Yak, AKA Jeff Minter.

So here's that challenge. Play the game using one player and droid assistance and see how far you get, as well as what sort of score you can manage

rack up. There are none of our usual spiffing prizes on offer – after all, there's no way we can check whether or not you've been honest – but you will have the satisfaction of knowing you've beaten some of the best Llamatron players on the planet. Not to mention that Jeff Minter, too.

HOW WELL YOU SCORED

Rate yourself like this:

If you:	You are:
Beat Chris Lloyd	Far too busy to play games
Beat Ed Ricketts	Seriously addicted
Beat Jeff Minter	In need of a job
Beat Jeff Minter and manage to complete all 100 levels twice	Currently undergoing psychiatric treatment

TIPS

Need some tips? There are a few ways of getting bonuses. Try and collect all the llamas before clearing a screen – the last beastie collected gives you 1,000 points. Use the hearts to make the llamas fall in love with you and run towards you. Picking up the three-way firing bonus gives you triple shots and double points for each nasty killed. The Floyd bonuses (the rainbow things like the album cover design of The Dark Side of the Moon) also help. And sometimes, if you're doing really well, you might see a warp bonus (a "W" in a bubble). Pick this up to warp forward five levels and get 50,000 bonus points. Finally, beware of Level 51 – it's a bitch.

to re-engage afterwards, so look at the keys carefully before removing them. To clean the key tops individually, spray some of the anti-static foam onto the cloth, place the key into the cloth and rub it until it is clean and shiny. Repeat for every key on the keyboard.

To clean the keyboard itself, spray some foam on the cloth and work your way around the key posts. If there are difficult gungy bits between the posts, use a cotton bud dipped in some foam and rub like mad. To clean the keyboard and keys properly takes well over

an hour. You can take this opportunity to use a dust-buster or mini-vacuum cleaner to suck all the dust out of your machine and clean the outer case. Remember, always spray the foam onto the cloth and never onto the machine itself. When everything is sparkling, replace all the keys and reassemble your machine.

To keep your ST pristine it's a good idea to get yourself a dust cover – any computer shop sells them for about a fiver, but We Serve ☎ 0705 325354 offer them for £4.70.

Good manners are made up of petty sacrifices.

Good manners are made up of petty s

Esc	1	2	3	4	5	6	7	8	9	0	-	=	\	Backspace
Tab	Q	W	E	R	T	Y	U	I	O	P	[	]		Delete
Control	A	S	D	F	G	H	J	K	L	;	'	Return		
Shift	Z	X	C	V	B	N	M	,	.	/		Shift		
Alternate												CapsLock		Hit ESC for MENU

Good manners are made up of petty sacrifices.
Ideas are such funny things; they never work unless you do.

● Scientists have proved that practising your typing skills can ward off all sorts of illnesses, such as stupor of the larynx, inflation of the stoat and cribbing of the exam paper.

f j a j f fff aaa jjj aj aj fj ja ja fj jf faj jfa fja

Esc	1	2	3	4	5	6	7	8	9	0	-	=	\	Backspace
Tab	Q	W	E	R	T	Y	U	I	O	P	[	]		Delete
Control	A	S	D	F	G	H	J	K	L	;	'	Return		
Shift	Z	X	C	V	B	N	M	,	.	/		Shift		
Alternate												CapsLock		Hit ESC for MENU

f j a j f fff aaa jjj aj aj fj ja ja fj jf faj jfa fja
faj jfa jjffaa faj jaj ffjj jjff afa jaj faj jfa aajjff

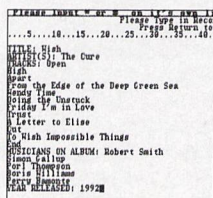
● The typing tutor supplied on this month's Cover Disk holds your hand while leading you through such alien concepts as using J, F and K keys and idly looking out of the window while typing notes to the milkman.

8 Catalogue your collection of things

Everyone's got a collection of something or other, whether it's CDs, books or interesting diseases. Wouldn't it be good to have these catalogued somehow? CDs, for instance: if all their details were stored away on your ST, it would be easy to search for all albums featuring, say, Peter Hammill (whaddya mean, who's Peter Hammill?).

Supercard 2 from Cover Disk 35 is perfect for storing details on anything you like. Follow this guide to see how you can catalogue your collection of CDs.

```
PICTURE TRACKS FROM CD ON L+R CHAN
-----
...5...10...15...20...25...30...35...
High
The Edge of the Deep Green Sea
High
Priddle I'm in Love
A Letter to Elise
With Impossible Things
(SMITH) Robert Smith
Smash Lipson
Smile Williams
CAN RELEASED 1997
```

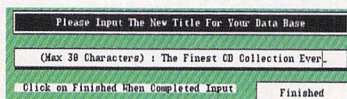


click on Add. Use the function keys to call up the macros you've just defined and enter the data for the first record.

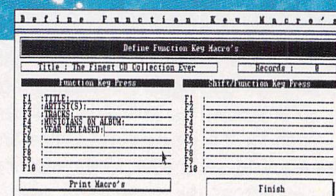
Max Records		
100	1500	5000
200	2000	10000
500	3000	20000
1000	4000	32000

1 Choose the maximum number of records you're likely to need. If

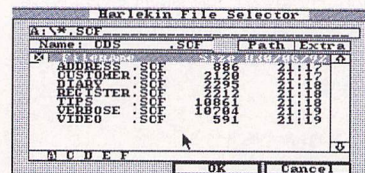
you're still using the unregistered version, you can only use 100 anyway. 10,000 is more than adequate for a CD collection.



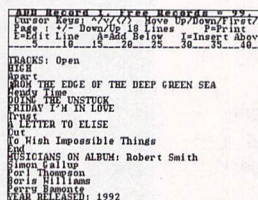
2 Decide how you want the records laid out – for a record collection, you might have details of Title, Artists, Tracks, Musicians on Album and Year Released. Change the title of the file, so click on Rename Title and type in something appropriate.



3 To set up some macros, click on **Define Macros** and enter the names you're using for fields, such as **Tracks** and **Artists**.



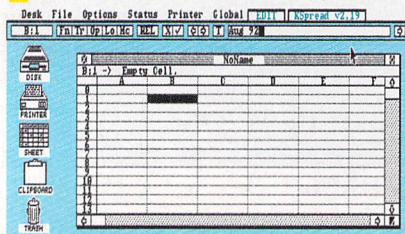
6 Carry on adding records in the same way until you've done the whole lot. Save the file every ten minutes or so, otherwise you might lose it all if there's a power cut.



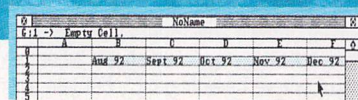
out somehow. Press **<E>** to edit a line, amend it, then press **<Return>**. When the record looks as you want it, type **<*>** to add another record, or **<#>** to get back to the main menu.

5 When you've finished a record, type * on a new line and press <Return>. If you've made any mistakes on a record, you can edit it or change the layout of a line, amend it, then press OK as you want it, type <*> to get back to the main menu.

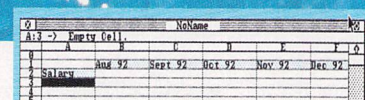
Money matters



1 Boot up the program and you see a blank spreadsheet. The first thing to do is enter your row and column headings, so click on cell B1, then on the V at the top until it changes to T (for text). Type something like Aug '92 in the first column heading. Then click on the down-facing arrow to the right until it faces right. Press <Return>.



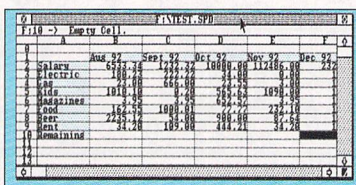
2 Enter the data and the cell cursor moves to the right as indicated by the arrow. Carry on entering the rest of the data, pressing **<Return>** each time. When you've finished, press **<Undo>** to leave editing mode.



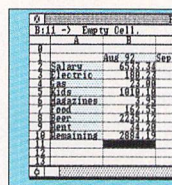
3 Now click on cell A2, then on the text entry box. Enter something along the lines of Salary. Click on the arrow so it faces down again, then press <Return>.



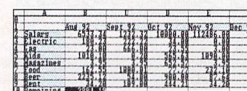
Using *K-Spread 2* from Cover Disk 36, you can keep track of your household accounts very easily. By setting up a spreadsheet listing all your incomings and outgoings, you can see instantly what would happen if your rent suddenly went up, or if you got a huge pay rise. Here's a simple example of how to put together a housekeeping spreadsheet.



6 Continue on to the other months and then enter any other estimated outgoings.



leave editing mode and select cell B10. Click on the letter V until it changes to F for formula. Enter B2-B3-B4-B5-B6-B7-B8-B9 and press <Return>.

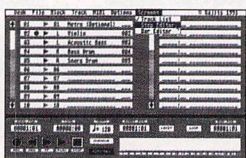


mula to the other “Remaining” cells, click and hold cell B10, then drag it to the “Remaining” label so the whole row is highlighted. The column range bar appears at the top of the screen. Click in cell B10, then in F10 to indicate the range of cells you want the formula copied to. Then click on OK.

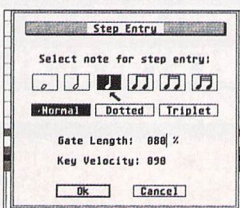
8 10 COPY

Sky's the limit

 Do you listen to pieces of music sometimes and think "that tune would be much groovier if there was a tambourine in there"? Now's your chance to improve all those songs that irritate you

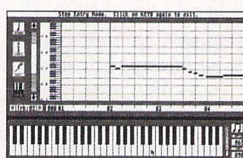


instructions in the *Sound and Vision* supplement. Your screen should look like this with your choice of sounds. You only need the Metronome (Optional) on track 1 if you enter the music live from a MIDI keyboard, otherwise delete the sample and ensure the Metronome is off.



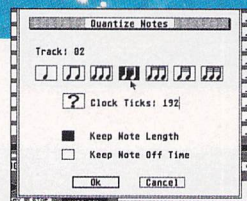
mode. Clicking again on any of the three icons on the bottom right of the screen gives you a Step Entry dialog box. From here you can select a note value for the start of the piece.

2 Enter the Step Editor page and click on the keyboard icon to enter Step Entry



enter more than one note in the same place. Although this is feasible when playing back a polyphonic synthesizer, the built-in samples are monophonic – that is, they can only play one note at a time. Once you've input your main theme you can add a bassline and drums. These samples affect the style of music depending on how you enter them. You could have a pulsing electronic style bassline using extremely short notes, or a more funky rhythm section.

4 You can use quantization to alter the feel of a track, and to



correct stray notes. Use different settings from the Track menu option on your recorded music. Quantization is intended to correct irregular notes, but you can use it to alter the style of a track, and is easily undone if things aren't to your liking.



Animate and be damned



Deluxe Paint is one of the best pieces of software you can get for the ST if you want to throw some pixels about. Nestled in its mass of icons and functions is a little picture of a film camera and next to that something that looks like a stack of boxes.

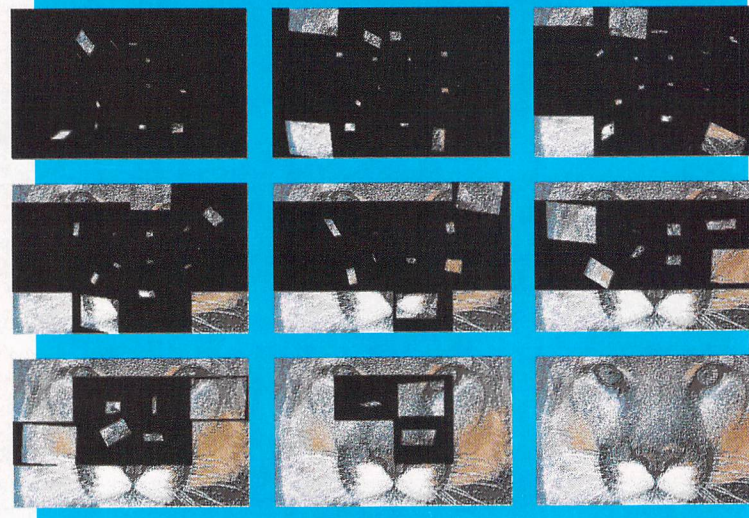
It doesn't like to bragg about it at parties, but *DPaint* has a smashing animation studio built into it. This works using brushes – areas of screen you've cut from a picture – and a process called tweening. Tweening takes the hard work out of animating – you define the start and end points of an animation and your ST figures out all the in-between bits. Each frame of your animation is held in memory as a compacted IFF file – the more complex each screen is, the more memory it takes up, so it's best to keep your brushes fairly small or your animations short unless you're packing lots of RAM.

Cut a quarter screen sized brush, then reserve a series of frames – click on the movie camera then on Frames and enter a number, about 30. Now click on the tweening icon next to that and set a start and end point. There are six parameters to each – the position along each axis and the rotation around each axis. The x axis is horizontal, the y axis vertical and the z axis is the one going in and out of the screen.

You want the brush tumbling towards you like some TV ad? No problem. Set the start value for z to about 1,000 – this starts the brush off in the background. Now add a spot of rotation – for the start values for x, y and z rotation put in the value 360. Now click on Preview to see a wire-frame view of your block going through the sequence. If everything looks hunky-dory click on Tween and your ST generates the animation for you. Back to the animation icon and select Loop, then click on Play. You then get instant and pretty damn impressive animation. You can whizz graphics about the screen in all three dimensions, making them tumble as they go. Just add flair, time and groovy graphics, mix well and allow to settle.

● You can get hold of *Deluxe Paint* for £59.99 from Electronic Arts (☎ 0753 549442)

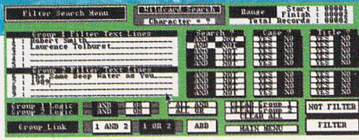
This sequence of a series of blocks zooming towards the viewer and magically joining up to form a complete picture was generated by cutting the original screen into 16 blocks and tweening each one separately. Each block started at a z value of 3,000 but each had different rotational positions



● Part of a 300 frame fish fly-past. The original brush was reduced in size and the z value increased to give decreasingly smaller fish moving more slowly in the background.

FROM		ROT.	PREVIEW
X	500	360	
Y	1000	0	TWEEN
Z	3000	180	
TO		ROT.	COUNT: 30
X	100	0	FRAME: 1
Y	50	0	SET POS.
Z	0	0	FROM TO

● *DPaint's* animation controls are where the action starts. On the left are the start and end points of your block for each axis and where rotation around that axis is to start and end. Click on Preview to get an idea of what it's going to look like, then on Tween to start calculating the screens.



main menu and you're presented with the Filter screen.

Type the criteria you want to search for in the Group 1 and Group 2 fields. If you want records containing this data to be found, click in the And box next to each field. If you want records not containing this data to be found, click on Not. Click on Yes in Case? to take into account upper and lower cases. Use Yes in the Title if the card should start with the search string.

Group 1/2 Logic controls how the criteria in each group link: click on And and every condition must be fulfilled for the card to be selected. Clicking Or means only one of the conditions need be fulfilled. The Group Link box does the same, but for entire groups. Click on Filter to select cards you want. You can then print out details of your selections or output the filtered records to disk as a .TXT file, then import them into a word processor and tart them up before printing.

That's all you need to know to use *Supercard 2*. Each time you get a new CD you can simply add its details to the list and save the file. Make sure you keep a backup copy of your database disk at all times – you don't want to

lose all the work you've put in. There are lots of other functions to help you manage your database, but they're not essential. Experiment and you'll soon learn how to use them. Even better, register and get the full manual.

Month	Aug 92	Sep 92	Oct 92	Nov 92	Dec 92
Shiners					
Electric					
Gas					
Magazines					
Rep.					
Real					
Unassigned					

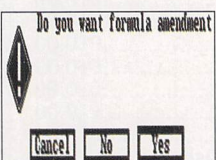
4 Continue adding your outgoings for each month, pressing <Return> to enter the data and move the cursor down. Remember, hit <Undo> to finish.

Month	Aug 92	Sep 92	Oct 92	Nov 92	Dec 92
Shiners	650.00				
Electric	100.00				
Gas	100.00				
Magazines	100.00				
Rep.	200.00				
Real	200.00				
Unassigned					

5 Next, put in some values for all your August outgoings. Click in cell B2, then click on the T to change it to a V for value. Enter the amount of money you made in August, followed by <Return>. Continue going down the column with the other figures.

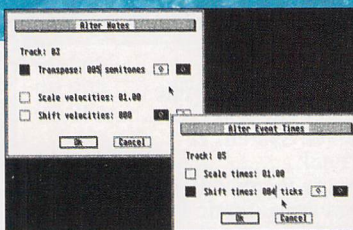
Month	Aug 92	Sep 92	Oct 92	Nov 92	Dec 92
Shiners	650.00				
Electric	100.00				
Gas	100.00				
Magazines	100.00				
Rep.	200.00				
Real	200.00				
Unassigned					

10 Then other remainders are calculated. Changing any of the outgoings in any month alters this amount accordingly, so you can prepare for changes in income.

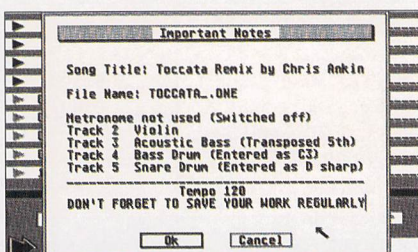


9 Press <Return> to get rid of the warning that appears. Another box asks if you

want the formula amended for each column. Click in Yes, otherwise the same value is copied to each cell.



ing alters the feel of a track: shifting the snare drum forward a few ticks gives a sense of underlying tension, shifting the timing backward makes things more laid back – and it can be equally as effective on other instruments.



5 You can also experiment in the Alter Notes and Alter Times options.

Shifting the pitch by a few semitones to create harmonies can give the music a different atmosphere when you play it back with an un-altered bassline – fifths, sevenths, and ninths work well. The timing

6 Use the Song Notes box to write all your songs details.

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12 Getting on-line

To get the latest PD software via your ST you need to get a good start in comms – you need a modem and a PD comms package. First Choice (☎ 0532 637988) supply Supra 2400 baud modems for £79.99, and you can get the latest version of Vanterm (ST FORMAT Cover Disk 17) from the ST Club (☎ 0602 410241) on disk COM.27.

Just connect the modem to a telephone socket, then connect your ST to the modem via the serial port. Once it is connected up and switched on, you can load Vanterm. The settings for communications are already set and work with 99% of all bulletin boards.

There are two main types of BBS (Bulletin Board Service). There is the BBS that's run as a hobby for which you just pay your phone bills, and complex information systems like Compuserve where you also have to pay to access information.

```

Editing Bath BBS
Use ^ for 1/2 second delay, ^A for CR, ^B for real B, ^O for comma
Enter new information or press RETURN to keep old information

CURRENT name of place or BBS to call: Bath BBS
CURRENT telephone number: 0225 840060
CURRENT baud rate: 2400
CURRENT duplex (CALL or HALF): Full
CURRENT username for this BBS or system: Full
CURRENT password for this BBS or system: Password

BBS name of place or BBS to call: Bath BBS
BBS telephone number: 0225 840060
BBS baud rate: 2400
BBS duplex (CALL or HALF): Full
BBS username for this BBS or system: Full
BBS password for this BBS or system: Password

Is this correct? (Y/N) - Returns: Y
  
```

● Before you can use a modem, you need a number for them – the Bath BBS (☎ 0225 840060) is a good one for ST owners. Go to the Config menu in Vanterm and select the Edit Dial Directory option. Click on the top left box marked "Empty" to enter the information for Bath BBS. Enter the BBS name on the first line and the phone number on the second. Press <Return> for the next two lines because they are correct defaults. The fifth line is for your name and the last line is your chosen password.

```

Automatic 0225 840060
Select name to dial with left mouse button or hit right button to exit
Selecting any CHAIN item initiates Chain Dialing for all CHAINED items

01 Bath BBS
  
```

● Exit from the Edit option and select Save Configuration from the Config menu – this saves the data you have just entered to disk. You can now log on to the BBS. From the main menu press the right mouse button, this takes you to the terminal page. Press the left mouse button and the dial directory is displayed, click on the only entry so far, Bath BBS.

```

CONNECT 2400
Nicktron Multi-User BBS, Version 3.0 By Timothy Purves.
Copyright (c) Nicktron Inc. 1985-1989. All rights reserved.

Welcome to the BATH BBS.
New users!
Please enter your Christian and Surname
Logged on to Modem 1
  
```

● The modem automatically rings the number. If you successfully get through you see the words "Connect 2400" and a welcome message. When you are prompted for your name, press the left arrow key and the preset you entered earlier is input.

JARGON BUSTING

Baud rate: this relates to the speed of data transmission – the higher the baud rate is, the lower your phone bills are going to be.

Full duplex: a comms program option enabling two machines to talk to each other at the same time.

Half Duplex: an option enabling only one machine to talk.

Hayes: an (almost) universal set of commands for controlling modems.

RS232 settings: normally 8 bits, no parity, 1 stop bit. Two machines need the same RS232 settings to communicate.

```

BATH BBS THE FIRST
Multi Line ST BBS
in EUROPE!
24 hours per day
0225 840060

(r)
Association of
Shareware
Professionals
ASP Approved BBS
ST Shareware Authors Support BBS

A Division of Bath Publications.
Sole U.K. Distributors of
  
```

● You have to register if you're a newcomer to the BBS – this gives you 20 minutes to explore the various parts of the BBS. After registration is confirmed you can log on for an hour a day, and if you subscribe (£10 a year) you can access the system for eight hours a day.

13 Video titling for beginners

Wouldn't your home videos be improved by adding a few captions to the images? This is simpler to do than you might imagine, and you don't even need a genlock. What you do need though is an art package (*Degas*, *Canvas* or *Neochrome*) and a lead to connect your monitor port to the Video In socket on your video recorder. There are, of course, several purpose-designed packages to give you fancy fades, scrolls and wipes, but they are not absolutely necessary.

Once you have your cable ready and your ST connected to the video recorder, change your video channel to the AV setting. This is designed for the reception of video

and audio signals from external sources such as video cameras, satellite receivers and other video recorders. Once the channel is set, anything you do on your ST can be displayed on the TV via the video channel and recorded accordingly. Don't worry about sound, that can be added later.

Prepare your pictures and captions in your art package – then you can practise recording them onto tape. The best way to do this is to pop a tape into the video, press Record and Pause. Now display the first picture/caption on your ST – you can do this from the art package if you like. Remember that the caption needs to be recorded on tape long enough for people to read.

Press the Play button on your video and let it record for about ten seconds, then press Pause again. Now display your next picture and press Play again. Keep repeating the process until all your titles have been displayed.

To record sound you need to use the dub facility of your video recorder. Connect a lead from your stereo systems Line Out socket to your video recorder's Audio In

socket – a straight phono plug to phono plug can do this. Wind the video tape back to the start of the titles and set your video up to Audio Dub – referring to your video's manual. Start the video recording and play the music you wish to record, this records onto the video without affecting the picture. When you're adding titles you need to use two video recorders so that you can edit the video at the same time.

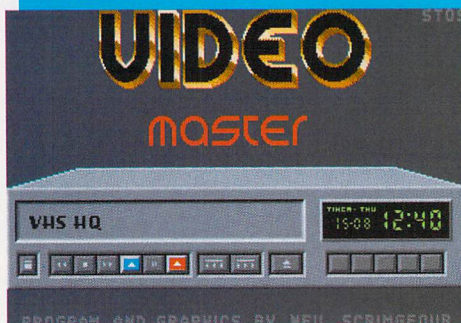
HARD STUFF REQUIRED

The sort of lead you want is two-core screened cable (two conductors wrapped with copper sheathing) with a 13-pin DIN plug for the ST end and a phono plug (usually) at the video recorder end. Pin 2 of the 13-pin DIN plug connects to the centre pin of the phono plug, and pin 13 connects to the outer shield of the phono plug. The parts required can be obtained from your local Tandy, Maplins or electronics shop. Maplins also offer a mail order service on ☎ 0702 554161. Here are the Maplins numbers:

13 pin DIN plug	JW95D	£ 1.45
Phono plug	FJ89W	£ 0.20
Two core cable	XR20W	£ 0.24 per metre

Useful Video titling software...

- Video Master from the ST Club, Disk BPR.20, £ 3.95. Call ☎ 0602 410241.
- Video Titler ST v2 from Laser Distribution, £34.95. Call ☎ 0579 82426.



● The intro screen from the Budgie productivity Video Master program, a neat little utility written in STOS to create titles for home videos.

14 My God, it's moving...

One of the things STOS can handle better than any language, short of complicated and almost impossibly complex machine code, is sprites. Sprites are little piccies that move about your ST's screen – spaceships in shoot-em-ups are sprites, and they zoom about zapping other sprites. The simplest way of doing this for yourself is to use the in-built sprite interrupts STOS helpfully includes. So then, dig out your copy of STOS from the cover of STF 37 and load in one of the example sprite memory banks or use the sprite editor to design your own. Done that? Right, put

him on-screen using the `sprite` command. You can have up to 15 on show at once. Start your proggette with this:

```
10 key off : mode 0 : curs↓
off : flash off : hide on
```

This turns off the function key box at the top of the screen, switches to low resolution, zapps the cursor, the flashing and the mouse, leaving a blank screen ready to get to work on. Let's add a sprite:

```
20 sprite 1,160,100,1
```

This whacks your first sprite to the x and y coordinates 160, 100 respectively using the first sprite from your sprite memory bank. Want him to move about under joystick control? No problem at all. The simplest way is to construct a simple loop using the `move x` and `move y` commands to shift the sprite and constantly read the joystick. Like so:

```
30 if jright then move x↓
1,"(1,2,1)"
40 if jleft then move x↓
1,"(1,-2,1)"
50 if jup then move y 1,"↓
(1,-2,1)"
60 if jdown then move y↓
1,"(1,2,1)"
70 move on : goto 30
```

The `move` commands all refer to sprite number 1 – the one you are using. In the quotation marks are the movement parameters – the first number is the speed of the movement, the second is the step each move makes – in this case, two pixels each time – and the last number is the number of times to do it. Try experimenting with the values. Adding an `↓` at the end of the command has the little chap scuttling along until you change direction.

Looks a bit empty, no? So you can add a background – any low resolution

screen is OK, you can use the title screen from inside the main STOS folder. Reserve a memory bank, say 10 as a datascreen and load the screen in. Copy it to your screen with the command `screen copy 10 to physic`.

When you move the sprite about, it has the effect of wiping out your background. Panic not, STOS has a system for getting round this – a background screen which is used to fill in the gaps left when a sprite bounces around. To keep your screen intact, you need to copy your picture onto this screen as well as the physical screen. Add the line `screen copy 10 to back`. How about this one? Add:

```
65 if fire then boom
```

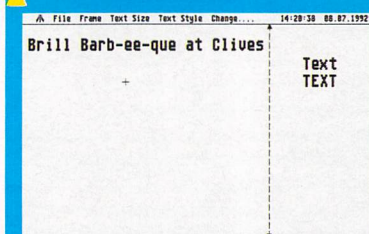
It is, admittedly, rather crude at the moment, but with a bit of tweaking it could be the start of something much better. For a shoot-em-up you need collision detection, a spot of animation and few bullets flying about.

Doing all this is no push-over even using a versatile and powerful language like STOS, but with just a little effort and imagination you could be working on the next big thing. On second thoughts, achieving that might take quite a large amount of effort and imagination, but you know what we mean. Now get coding.

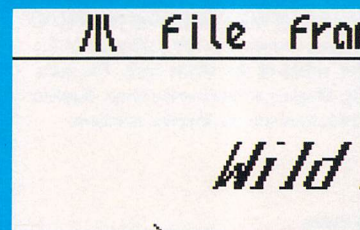


● He walks, he jumps, he fires machine guns at your relatives. STOS is ideal for manipulating sprites with all sorts of sexy sprite commands at your fingertips.

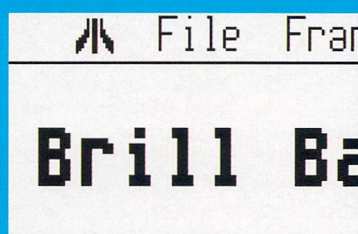
15 Summertime prawn roast



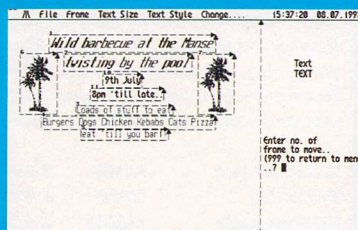
● Prepare the text you want in a word processor or with the text editor. Be sure you have the text laid out in the pattern you wish to use in your invitation – you are then able to cut blocks of text from the screen once you have imported them.



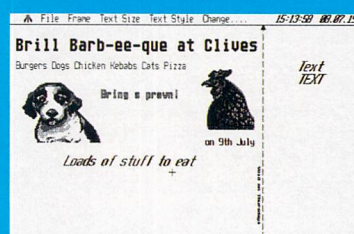
● By using two basic font styles, you can build an effective, neat and tidy invitation. Of course, you can still vary the size and style (outline, bold, italic and so on) but it's best if you stick to the two chosen typefaces.



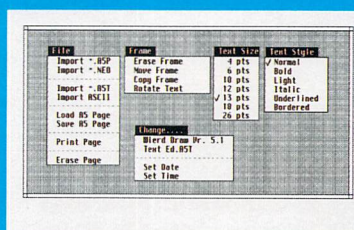
● By selecting different font types, you can convert your ASCII text into a variety of styles. Neochrome files can be imported and sections cut and pasted into your picture. There are several files of clip art included with the program.



● If you are not happy with the position of any of the text or graphics, you can move or delete each frame. Type in the identifying number of the frame you wish to move and either place it in a new position or delete it.



● You can gradually build up your picture until you are satisfied that it looks as you want it. We used three different fonts in various sizes and styles. DTP work always looks better if you only use two fonts – too many styles make a document look untidy.



● These are DTP A5's menu options. File enables you to import text, graphics, pages and to print. Frame enables you to move, delete and copy frames. Text Size and Style menus control text output. Change accesses a text editor and a drawing utility.



Come the summer, everyone feels obliged to have a barbie – each year thousands of sausages are burnt to a crispy black shell on the outside with a delicious raw pink centre. Why don't you have a barbie, win friends and influence people by producing an impressive invitation with your trusty calorie-free ST?

Using a PD program called DTP A5 you can import graphics and text to produce A5 size printouts. The program is available from the ST Club (☎ 0602 410241 on disk WPR.87) and comes complete with some sample clipart in Neo format, the *Font Tricks* Desk Accessory and a folder containing some alternative fonts. The program works both in high resolution and with the supplied monochrome emulator.

For best results print your invitations on heavy gauge A4 paper – it is not quite as thick as card and works in most dot matrix printers without any problem.



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ISSUE 37

August 1992

Two Disks: STOS Basic language and Animaster sprite designer, International Sports Challenge demo, 3D Picture modelling package
Inside: How to create great games, monitor roundup, Calamus SL reviewed and rated



ISSUE 36

July 1992

Two Disks: K-Spread 2 spreadsheet package; Fire and Ice demo, Super Boot 7.4, The Financier money manager, and more
Inside: 50 ways to soup up your ST; what happened to the games heroes of yesterday? HP inkjet printer review



ISSUE 35

June 1992

Two Disks: GFA Basic v3.5, GFA Assembler, GFA Raytrace complete; Pacific Islands demo, complete database and astrology programs, and much more
Inside: upgrades step-by-step; ST astrology; program fractals



ISSUE 34

May 1992

Two Disks: GFA Draft Plus 3 complete 2D vector drawing package; Campaign demo; Intro Designer; six more full programs
Inside: 21 pages of art guides; ST Book portable tested; weird games; 120 tips; Buyer's Guide



ISSUE 33

April 1992

Two Disks: Write On package; Leander preview; two raytracing programs; complete Penguin game; fractals and more!
Inside: Over 20 pages of all sorts of tips; complete guide to raytracing; get the best from Sequencer One



ISSUE 32

March 1992

Disk: Knightmare demo; Kozmic pattern generator - exclusive; STOS extension and more!
Inside: Find out how you can make money with your ST; reviews of STOS 3D and Timeworks 2; over 40 ST tips!



ISSUE 31

February 1992

Disk: Stereo Master preview; Revenge of the Mutant Camels - complete; ten utilities
Inside: All you need to know to get started with the ST; roundups of top software, games and add-ons; inside your STE, assembly language programming



ISSUE 30

January 1992

Two Disks: complete Sound & Vision packages, plus "Get Started" supplement; Populous 2 and Baby Jo demos; and more
Inside: Being creative on your ST - desktop publishing, programming, graphics and music; high res games



ISSUE 29

December 1991

Disk: Autoplay intro sequence creator; Daylight Robbery and Stereo Replay demos
Inside: Making your own intros; score-writing packages; ST-related book roundup; Band in a Box and other packages reviewed and rated



ISSUE 28

November 1991

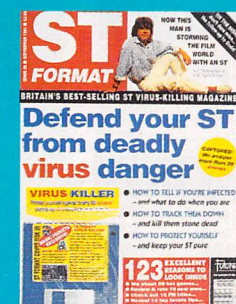
Disk: Three fractal programs; MiG-29M Super Fulcrum; Home Accounts 2 demo
Inside: All you need to know about fractals on your ST; 25 "serious" packages reviewed; floppy drive roundup; PageStream 2 reviewed and rated



ISSUE 27

October 1991

Disk: Rolling Ronny demo, ST Writer Elite v4, spiral pattern generator, six utilities
Inside: Professionals' graphics techniques; hard drive roundup
Plus 250 best buys in our 24 page buyers' guide supplement, Sam Tramiel interview



ISSUE 26

September 1991

Disk: Ultimate Virus Killer, Magic Pockets demo, TOS 1.4 fixes and a swag of utilities
Inside: Protecting your ST from viruses; how STs are being used to produce TV ads and business cards; Calligrapher reviewed, printer roundup

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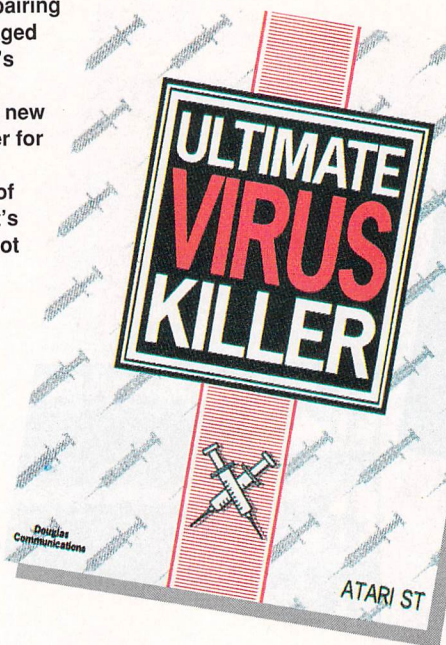
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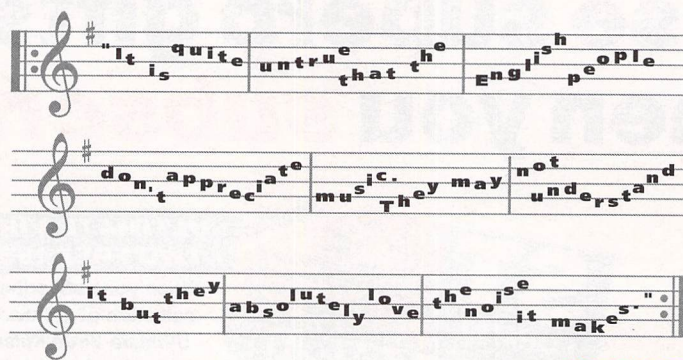
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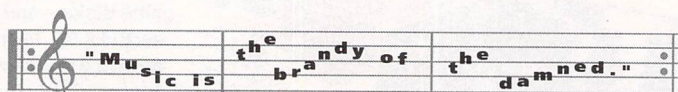
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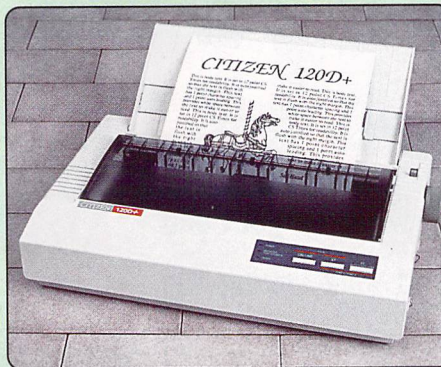
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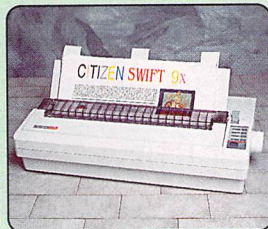
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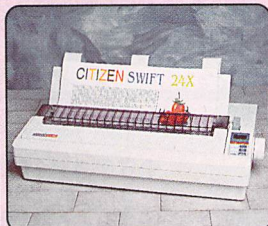
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RIB 3948 PN48 Multi Strike £3.61

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PRA 1240 Swift 9x/24x £35.25

PN48 ACCESSORIES
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PLEASE SEND A BROCHURE ON THE CITIZEN RANGE

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Address:

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Tel (Home): Tel (Work):

Company Name (if applicable):

Which computer(s), if any, do you own? 55G

Public Sector

And lo, he did stop messing about with the goat and come down from the mountains and walk among the people. And he did say unto them: "Look my rice bowl is clean and my underwear is blue." And the people were slightly confused and concerned and did say unto him: "Sod off, you loony, and don't you dare come back without a bushel of Public Domain reviews."

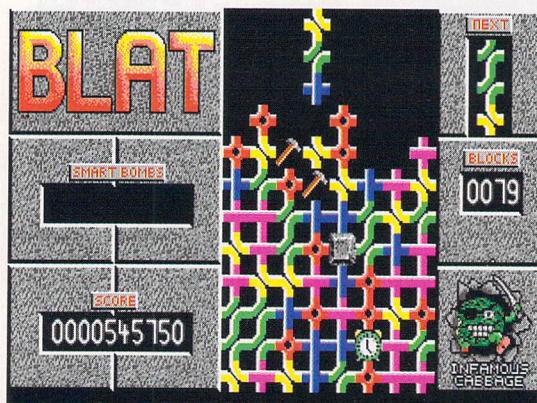
WHAT WAS THAT ABOUT GOATS?

It was nothing at all, this is about Public Domain and Shareware. First up, PD programs. These are programs that the author has decided to let go of all copyright, and includes a mish mash of games, demos of commercial games, little utilities, sound samples and self-indulgent demos. You can get them free through PD libraries – see page 48 – who charge only for the cost of the disk, package and posting, generally about £3 a disk. Shareware is also distributed through PD libraries, but the software is different in that the copyright remains with the author but the programs can be distributed freely. If you register for a small fee you usually get lots of goodies like updates or other programs.

GAMES

BLAT

Goodmans PDL – Disk GD 1627



● *Blat* should have you swearing at it in no time at all as the rain of coloured blocks fall in exactly the wrong place, again. Addictive, frustrating and jolly good fun to boot. 1MByte STEs only need apply.

Before we start, let's get one thing straight – this is *not* a *Tetris* clone. *Blat* has these blocks falling down the screen, each made of three coloured squares. You can move the blocks left and right, and hitting <Fire> changes the order of the squares. Get three or more in a row and they disappear in a satisfying explosion. Every now and again special thingies float down the screen to give you a fighting chance – and you need it. Level One's not too bad, but from there on up it's challenging stuff – you need to think very quickly. Everything moves dead smoothly and the sound effects are, for once, most certainly worth leaving the volume turned up for. Simple game, brilliant gameplay and horribly addictive. And, er, yes, it is a tiny-weeny bit like *Tetris*, come to think of it.

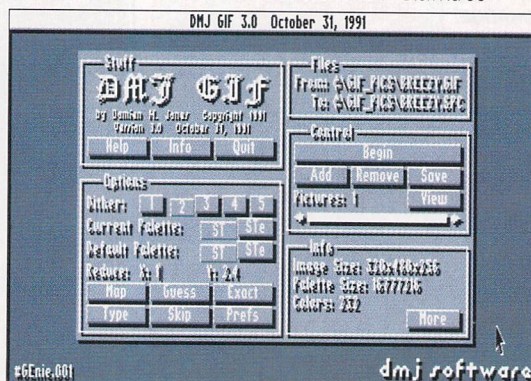
STF Rating: 85%

Sector

ART AND MUSIC

DMJ GIF

Caledonia PDL – Disk AG 96



● Looks a tiny bit daunting at first, but is only slightly daunting really. *DMJ GIF* does an excellent job at converting GIF pictures into something more useable and is damned clever about it, too.

The best GIF convertor in the Public Domain – not that there are that many, you understand, but this is definitely the best. A GIF is a standardised picture format invented to squash graphics of different sizes. They can then be distributed on bulletin boards so that pictures can be exchanged between different types of machine. *DMJ GIF* can convert any size GIF into a *Spectrum 512*, *Degas Elite* or *Tiny* format, and can make use of the STE's extra colours. The program uses clever dithering to reduce pictures larger than the ST's screen. Final pictures can be monochrome, greyscale or the whole works in 512 glorious colours. It analyses the GIF and picks the best conversion method – you can run batches of files, too, so you can pop off for a cuppa while it gets on with the job. Now there are scores of nickable pictures for bulletin boards and those over-priced PC "compatibles."

STF Rating: 85%

CYBER SNAKE

Caledonia PDL – Disk GM 103



● He eats and he gets longer – *Cyber Snake* casts a strange spell which forces you to have "just one more go" before you stamp on the disk going "argh" a lot. Frustration alleyway.

You control this snake who eats diamonds – each time your snake consumes one, it gets longer and consequently it's trickier to get about to collect the remaining gems. Logic? Pah! Who needs it – this is an arcade game. Each level is littered with things to help or hinder your progress: strange fungal growths reverse the controls and locked doors mean you do have to do some hunting around to find the keys. There are plenty of levels and, if you register your copy, you get a level editor. Control is easy enough at first, but, as you get longer, you need to really get into the dexterous waggling and key-pressing. Scrolling is smooth and the whole thing is slick, scaly and skims along the ground at a fair pace.

STF Rating: 77%

GET IT!

DBWRITER: the new contender for the best character-cruncher title.

COPY IT!

THE OVERDOSE DEMOS: all aspiring demo writers, take notes.

REFORMAT IT!

THE SUPREME DEMO: all aspiring demo writers, take notes.

AWARD FOR DODGINESS

SPX CREATOR: for some reason, most extended format screens seem to be concerned with anatomy. Odd.

SPX CREATOR

Floppyshop ST – Disk ART 3189



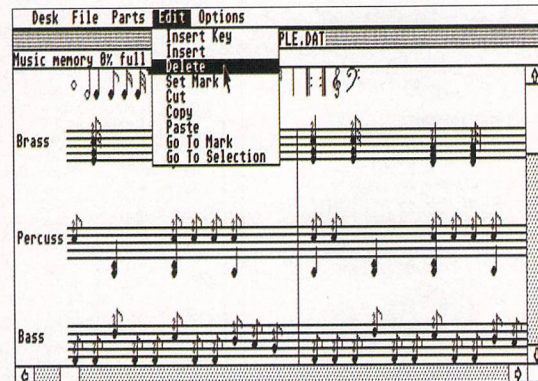
● Want one of these? It's a 512-colour picture that can scroll up and down – see, this one's made of two pictures put together. Ideal for – er, looking at long pictures.

Bit sexy, this one – it creates 512-colour pictures larger than your screen. Why would you want to do that? Well, it comes with a viewer that enables you to scroll up and down looking at your new creations. And why would you want to do that? Er – it looks good, doesn't it? Pictures are made by joining up to ten Spectrum 512 piccies vertically, then saving the whole thing out in the new SPX format. The picture's a full 320 by 276 pixels and scrolls very smoothly. The creation program is friendly and completely mouse-driven. An amusing novelty to while away the long summer nights, a bit.

STF Rating: 67%

INTERNOTE

PD.ST – Disk GL 431



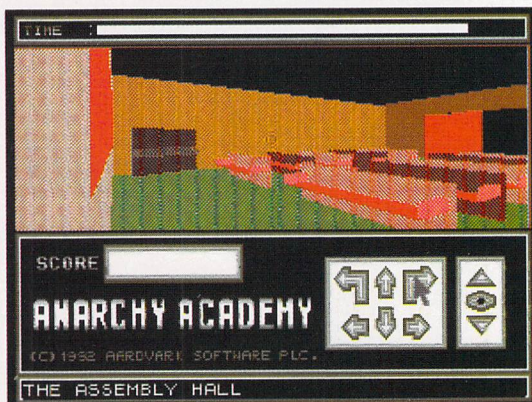
● Internote enables you to enter music note by note at your own pace using normal musical notation, then to chuck the lot down the MIDI cables at your synth. Shame it's limited by basic MIDI implementation and incompatible files.

Internote has you composing sounds for your MIDI synth using the archaic system of symbols called musical notation. It's stunningly simple. You pick up notes with the mouse and deposit them on the staves. When you've assembled your particular favourite brand of sound, you can listen to the result on your instrument. You can cut, paste and edit sections to your heart's content. MIDI messages are simple – if you do something silly, it throws up an error message and deposits you back at the Desktop. Registration brings you a proper manual and updates. A reasonable enough place to start for the beginner with a synth, knowledge of musical notion and very little dosh, although full-blown sequencers are around in the Shareware circuit that can take you a lot further.

STF Rating: 62%

ANARCHY ACADEMY

LAPD – Disk G 200



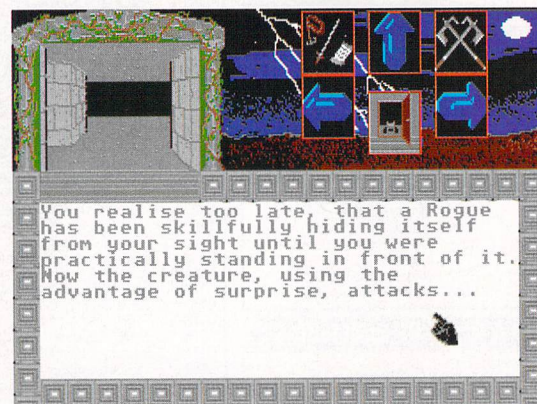
"Now, they know who they are. We're all going to wait here until they come forward. I'm sure we don't mind waiting here all day," said Mr Turbot swaying only slightly. **Anarchy Academy** – the 3D adventure of scholastic obliteration.

Come on, admit it, at one time or another you've set fire to your school, haven't you? Or at the very least nicked the laser from the Physics lab and shot it up a bit. **Anarchy Academy** gives you the chance to relive all those golden memories of the happiest days of your life. The mission is to blow up the school against the clock. It's a 3D Construction Kit effort that has you roaming a deserted filled-polygon world looking for objects and trying to get into the computer system. There are some well-designed 3D objects and the puzzles are logicalish – use the mirror to deflect to laser beam and the bottle of cheap wine to get into the sixth form common room. Not a wild ride, but a pleasant enough outing into adventure land.

STF Rating: 73%

DUNGEON LORD

LAPD – Disk G 197



The next contestant in the "most hackneyed ST game style," **Dungeon Lord** has all our old favourites – warriors with silly names, wizards with silly beards and men in long back robes who have perfected the moody look.

It's dungeon-delving time again, wading through mobs of rowdy orcs and trying to rid the world of the Evil One before he does something nasty to the fabric of the universe. One lone hero is zapped back through time to sort it all out and make the cosmos a safe and happy place to be in. It's the standard first person wander-round-bumping-into-walls-and-monsters-and-picking-things-off-the-floor style game. You have all the stats to keep an eye on and objects that you have to collect, keep and hit things with. The visuals are plain but passable, although the nasties never put in an appearance graphically. Some good samples accompany the punch-ups, though. It's no *Ishar*, but should keep those sad souls who would rather live in the world of mystic runes and barbarous barbarians quiet for a while.

STF Rating: 70%

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Characters between asterixes show special requirements;

M = Mono Res, *C* = Colour Res, *D* = Double Sided disk, *X* 1 Meg Ram. *S* = Not STE/Rainbow TOS

DESK ACCESSORIES & UTILITIES

U001 Dir printer, RAMdisks, Snapshot screen save. Desk Acc. loader.
U003 Desk. ACCs formatter, calendar, Disk Manager, calculator
U008 68000 Assembler, Address/Mailing List, Autodial Utility
U009 PICSWITCH 7 changes pics graphics res. Mono/colour emulators.
SWITCHER, 2 progs in memory. FSEL 5.5
U010 STE BOOTUP, boot medium res
U014 ARC file compiler. BI CLOCK set time/date. MONOEMUlator v5.0.
U016 IBM compatible disk formatter. ARC SHELL v1.91, MEGA formatter
U019 DRFLOPPY, disk editor, SCODE make ASCII for data transfer
U023 Packed with various progs for printing all kinds of labels. *M*
U024 CHK 2.3, All you'd need to know about a disk. IBM MODIFIER, alter DS Atari disks for use on IBMs.
U027 ANTIDOTE, detect & kill most bootsector viruses.
U028 DISKMECH disk analyser/archiver/editor, edit/format sectors etc, full docs. CPANEL
U030 AMC GDOS
U032 MOUSE TRICKS, extensive control over mouse, movement etc.
U033 MX-2 v2.3 a multi-tasking environment, up to 7 concurrent tasks. *D*
U034 DOUBLE CLICK format v3. 03 9/10 sectors, 80/82 tracks.
U035 DEC edit clone, Disk engineer v3.01 do alsorts to a disk via GEM.
U040 AUTOGEM autoboots Gem programs. VC Spreadsheet non-GEM.
U041 ADDRESS LOG, Address book & label printer, disk catalogue.
U046 SUPERKILLER detects 5 viruses, 7 anti-viruses.
U050 GEMINI Desktop replacement. English version *DXS*
U052 GEM PLUS, Neodesk variant.
U057 GEMDOS USER GUIDE, full of info about GEM-DOS
U058 ATARI TOS 1.4 bug fixes (STFMs with Rainbow TOS)
U059 XCONTROL: ATARI'S latest TT control panel accessory for all STs.
U063 MEMFILE 2.0: Memory and disk editor with powerful features.
U065 STDCAT v4.0, disk catalogue.
U067 ARCSHELL v3.0, Arc V6.0
U068 HITCHHIKERS PD shareware disk 2.0
U069 ST Zine shell, Disk mag development tool.
U070 SUPERB Intro creator, sprite, pics, text & music
U073 SUPERBOOT V7.0
U075 ST TOOLS, many features
U077 GOODIES, multiple featured desk accessory
U080 JAMES, the desktop butler.

GRAPHIC, FONT AND ART/DRAWING DISKS

A005 PALART, excellent art program with full doc files. *C*
A009 COLUMBIA, Drawing prog, some 3D elements. Studio (*X*), Drawing package. Both German
A012 DOODLE, mono & colour versions. Also some Mandelzoom pics.
A013 ST GRAPH: Comprehensive graph prog, handles bar, horizontal/stacked bar, line & dot charts.
A015 FONTS2, 7 screen/desktop fonts. inc. Columbia, Devoll, Hudson
A018 CANVAS, great art package
A020 PALETTE MASTER, art package, up to 512 colours. *C*
A024 FRACKTAL drawing program from Germany. Mono/Col.
A025 FONTKIT 3.31 *D*
A027 ANI-ST, ex-commercial package, quality animation system
A029 MASTERPAINT drawing package, excellent. Mono & Col.
A030 PICWORKS, enlarge/reformat pics up to 3 times normal size. *M*
A034 PUBLIC PAINTER, *M*
A036 SNOOPY cartoon pics. *C*
A042 ST CAD v2.1, a med/high res CAD package. Full docs. CALC-PLOT, scientific calculator
A043 THE ARTIST, Great drawing package with many options. *M*
A048 JIL CAD, Shareware. *XD*
A053 MOVIE CONSTRUCTOR, FACE ANIMATOR. *M*
A054 SIMPLE DRAW v3.4, art package. Docs foreign. Med/Hi-res
A059 MASTER DOODLE, shareware art package for the younger user.

CLIP ART

C002 Human figures, cartoons, titles. C013 Humorous clips, Letters A-Z.
C003 Sports figures, July 4th logos. C015 Babies, boys and girls
C010 Occasional Clips, Characters C016 Girls, Scrolls and Occasional
etc. Clips
C011 Loads more fruit, vegetables. C017 Artdeco, Baby boy & girl
C012 Herbs & Kitchen parts. C018 Varied Humorous Clips.

WORDPROCESSING & DESKTOP PUBLISHING

W001-006 TEX, 6 Disk Pack, document processor. *M*
W008 1st WORD wordprocessor. Professional fully GEM based
W009 Easy Text v1.2 fully working DTP demo (W010 for DS users)
W015 HYPERTEXT: Shareware prog. Produce professional docs. *MD*
W013 STPAGE, super fast editor
W018 WORD 400, Desk Accessory WPR. Fully featured
W017 ST Writer Elite V4.1 top quality wordprocessor

PROGRAMMING/LANGUAGE DISKS

P001 68000 Assembler
P002 STOS SOUND FX creator.
P008-P10. C LANGUAGE DISKS 1, 2 & 3 of Elementary C, a set of 3 disks.
P012 CPM EMULATOR, CPM-8 v2.0.
P013 CPM UTILITIES for P012.
P017 PROGRAMMING EDITORS; CONTEXT v2, PRO-ED & P-EDIT, full docs.
P019 Nigel Smith's ST 6800 pop-up ref. guide.
P020 SOZOBON C, Great C compiler *D*.
P022 SPRITE EDITOR. Create and save sprites.
P023 C TUTORIAL, disk manual.
P026 MKRSC a simple GEM resource construction utility.
P027 MODPAS, Pascal Compiler. *D*.
P029 GFA EXPERT, all you need to know about GFA v3 basic.

GAMES DISKS (colour unless stated)

G001 Warzone, Daleks, etc.
G014 SUPERBREAKOUT, 40+ brick types with special features. *M*
G016 NAPOLEON, wargame sim. *M*
G017 EMPIRE BUILDER property developer. LOST TREASURE & JUMPSTER
G018 RUSH, move bricks to create a way out for the ball.
G020 YAHTZEE, popular game.
G021 UPSTART shoot cherries. *S*
G022 COMPANION shoot 'em up in outer space
G025 ENGL AND Team Manager
G027 DIE ALIEN BLOB, a great shoot 'em up, excellent graphics.
G028 TREASURE SEARCH, find the hidden treasure. *SD*
G033 ADVENTURE WRITING SYSTEM
G037 TUNNEL VISION, maze game
G038 BERMUDA RACE 2
G039 INVASION, adventure
G041 Hack! is a D&D adv.
G045 AYATOLLA, terrorists attack. *S*
G046 ROBOTZ, 40 levels, great
G047 FRUIT MACHINE simulator
G056 SLIDE, 3 levs, puzzle. *S*
G063 SOLITAIR 3D graphics. Macpan. Galaxy & Sprengmeister. *M*
G064 ATOMS mentally challenging, KILLERCHES fast & furious. AMMO-
TRACKS a superb race & blast 'em.
G068 SKIDPAN, motor racing. *S*
G069 STOCKMARKET, Wheel & Deal. Galactic Warriors, shoot 'em-up.
G084 FLOYD THE DROID, ultra fast shoot 'em-up. Sampled sound.
G085 AIR WARRIOR, Flight sim
G086 COMPUTER PINBALL, DEVASTATOR, 3D strategy game.
G090 TALESPIR, Wolf and 7 kids
G092 FUZZBALL, platform game
G093 SHIPWRECK, educational maths with graphics. *S*
G094 ZOG a great blasting game. SUPER SENSORI.
G095 A DUDLEY DILEMMA, adv.
G097 WIZZARD'S LAIR adv.
G098 UNDER BIRKWOOD Massive graphic adventure
G100 NAVAL BATTLE, Battleships
G102 CENTAURI, shoot 'em up.
G106 VIRUS, great graphics & sound. *S*
G108 FLYOVER, bombing raid
G109 GLOB, you collect cherry cakes while avoiding pursuers.
G111 TRACKER, you drive your tracker through enemy territory.
G112 OVERLANDER, shoot 'em up.
G113 CHANCE, battle the Archons.
G114 ESCAPE FROM THE TOMB OF RA.
G115 MUTANT, reactor out of control, workers mutate.
G116 KEY TO ATLANTIS, underwater scrolling shoot 'em up.
G118 MARS MAZE, platform game.
G119 STEEL, blast everything.
G122 HEDGEHOG, Frogger clone. *S*
G123 THE NAME GAME, +editor.
G128 TARK, great text adventure
G129 BATTLE FOR THE THRONE.
G130 LLAMATRON, a great Shareware game by Geoff Minter. *D*.
G131 VIDEO POKER: Las Vegas poker playing machine.
G132 DERRICK THE DROID: platform, shoot 'em up & puzzle game in one.
G136 PORK II: ZORK send up.
G137 MORIA: Fantasy RPG. *D*
G138 SHOOT 'EM UP BUILDER KIT *D*
G141 DUNGEON: Multi choice fantasy adventure with some humour.
G144 HACKMAN, 60 levels, Pacman clone. *S*
G145 ELVEN CRYSTALS II: Adv
G149 STARMAZE: Various levels, blast alien craft on your way.
G150 A NIGHT ON THE TOWN adv.
G151 TILE GAME, rearrange the letters. *S*
G152 SOKO, 50 levs maze/puzzle
G153 MEGARIDS, RIPCROD, SPACEWAR, BUGS
G154 BATTLE SCAPE 2 player fantasy war-gaming.
G155 FRUSTRATION, CRISSCROSS
G156 BACKGAMMON, POKER SO'D
G158 FLY ROBIN, SANTAS WORKSHOP
G159 PENGUIN, excellent, shareware
G160 CROCODILES PASTIMES.
G162 REVENGE OF THE MUTANT CAMELS 1 or 2 players.
G164 SPACE INVADERS, a classic
G165 BLOCKADE, Qix clone
G167 TENNIS great graphics/gameplay.
G169 ROCKFALL, boulderdash type.
G172 ENTOMBED, platform 5 levels.
G176 ARMOURLYTE, horizontal scrolling shoot 'em-up.
G177 GRAV, rotate & thrust.
G178 MAZE, split screen, 2 players + editor, great.
G181 OZONE, platform/puzzle, many enemies, shareware game.
G182 PDBOLO, excellent Arkonoid clone, colour & mono *DX*
G183 INFILTRATION, defeat the aliens, shareware.

APPLICATIONS - Spreadsheets Databases etc.

S001 DATABASE 1, GEM driven database.
S002 ST SHEET, quality spreadsheet *C*.
S005 B/STAT v2.01, sophisticated graphing & stat analysis. *DX*
S007 OPUS v2.2, GEM based spreadsheet & charting program *DX*
S009 WG DATA, high quality DTB. Full docs.
S011 DOUBLE SENTRY, fully working accounts package (no VAT)
S012 PERSONNEL DTB, Names & addresses DTB.
S013 INVENTORY PRO V2.0 stock control system.
S014 TCOS, tree structured DTB.
S015 ZAPCARD easy to use card type DTB.
S016 SHEET V2, spreadsheet. Similar to Lotus 123. docs.
S017 DATAPLOT, sophisticated data plotting package.
S019 FASTBASE, absolutely brilliant, sophisticated shareware database. Excellent features.

GULF TORNADO £1.99 (Not PD)

Great scrolling shoot 'em up. Blast those Migs and Missile launchers with your fighter/bomber. 1 or 2 players.

COMMUNICATIONS DISKS

CD001 PACK-ET-TERM v3. 3a, radio package with docs.
CD005 UNITERM v2.0a with auto-dialler & phone book.
CD006 VANTERM 3. 71 & 3.8 great communications package.
CD009 HAGTERM ELITE v3.3 powerful shareware comms package.

MUSIC

M001 COMPOSER, music creation.
M008 KEYBOARD program, various songs & samples.
M012 SINGING CALIFORNIAN RAISONS. *X*
M013 MUSIC WRITER, create music.
M016 CASIO CZ SOUNDS & EDITOR
M020 XBIO Music Const. Kit.
M021 PERCUSSAMAN, 4 track, 16 instrument, synthesised sequencer.
M022 SOUNDTRACKER PLAYER & MODULES. D_DREAD1, D_DREAD 2, PAT_MIX, RVB_DEMO, SPREAD.
M025 MFP, Music design package. *DXM*
M026 CHORDEX tool for learning major/minor chord shapes.
M029 MIDI v2.0 monitor. Med/High res. Shareware EX800 v2.0.
M031 DBRK4802, daybreak step time sequencer v.3.
M035 ACCOMPANIST 2.4, 16 voice shareware sequencer.
M040 EDSYNTH 1.2 music synthesiser.

EDUCATIONAL

E002 WORLD MAP GAME.
E004 Spelling Made easy
E005 REBUS WRITER, design & print rebuses. Samples included.
E006 BARNYARD, pair the animals from memory. *C*
E007 WELCOME TO CHEMISTRY V2. *S*
E008 CHUNNEL, A French to English & vice-versa tutorial game. *C*
E010 PERFECT MATCH, PENTOMINOES
E011 TYPING TUTOR (2) with full documentation.
E013 MATHS MADE EASY
E014 KIDGRAPH, KIDMUSIC, KIDPIANO, KIDPOTATO *C*
E015 KIDPUBLISHER, KIDSONG
E016 DOT 2 DOT, includes creator.
E019 SOLAR SYSTEM GEOGRAPHY
E020 GEOGRAPHY TUTOR
E021 ZOO MAKER, you're asked questions, the computer tries to guess the animal.
E022 ME FIRST, BUTTERFLY IN THE PARK.
E023 COLOURING BOOK.

GENERAL

F003 SKY MAP, display over 1500 stars.
F005 CONSTELLATIONS, A comprehensive astronomers disk *M*
F006 PLANETARIUM, get stats on almost any planet or moon.
F009 THE PLANETS. *D*
F012 AUTOROUTE, working demo covering the south of England.
F013 POOLWISE V3.5, pools predictor. MED RES.
F016 ST TOUR, guided tour.
F017 YOUR SECOND ATARI MANUAL.
F018 NEWGEN V4, shareware, 10 record limit.
F020 ST TECHNICAL MANUALS.
F021 BUSINESS LETTERS, 100 business style letters in ASCII code.
F022 ASSISTANT CHEF, 142 recipes + add your own.
F023 ASTRO 22, Astrology
F026-28 A ROMAN MYSTERY, graphic art images, Roman magazine, Graphic database with a murder investigation, plus more *3 disks*
F029 COMPACT OFFICE MANAGEMENT, excellent accounting program for small business' and sole traders. Comprehensive. *D*.

DEMO'S

D005 THE DEFINITIVE DEMO. *D*
D006 SLATATANIC CULT, Music Demo I & II. *D*
D007 ASTERIX DEMO.
D008 BOMB THE BASS.
D009 TRANSYLVANIA DEMO. *D*.
D010 SOUND CONNEXIONS. *D*.
D011 THE NEW YEAR DEMO. *D*.
D012 STINGRAY DEMO.
D017 COUNTERPOINT DEMO.
D018 CUDDLY DEMOS *S*.
D019 MASTERSOUNDS DEMO.
D020 ROBOMIX DEMO.
D021 STAR WARS DEMO.

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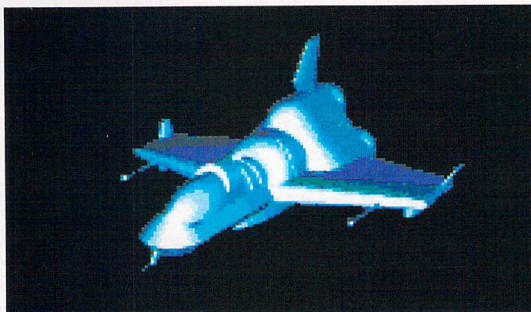
→ DEMOS

THE OVERDOSE DEMOS

State 808 PDL - Disk MDEM 66

Super demo, this - no messing about with menus, just a straight run through of sub-demos. Each is technically groovy and graphically absolutely whizzo. All of the short sections has a beautiful little graphic to introduce it and nothing drags on. Among the goodies are vector fonts, raster bars, plasma and fractal generators, 3D vector shapes and some great splashes of sampled sounds among the standard awful sound chip mania. Everything is smooth and beautifully presented - one of the best megademos to come along in quite a while. If you've never seen one or want a glimpse at what your ST is capable of, take a gander at this.

STF Rating: 88%



● This simply divine little raytraced spaceship does a quick spin and thrills us all - metallic blue is the look for this summer, it catches the light beautifully. *The Overdose Demo* unashamedly shows off and gets away with it.

THE PHALEON DEMO

Caledonia PDL - Disk D 172

Billed as a gigademo rather than just your plain ordinary megademo, *The Phaleon Demo* comes on four disks and has a whopping 34 sub-demos plus hidden screens from coding groups with silly names. There are four different menus including a *Dungeon Master* one and the standard guide-the-sprite-around one. Mostly the sub-demos are - er, uninspiring. Once you've seen ten screens of scrolling text full of mindless chat wibbling their way past you to chip music, you've seen enough. Buried among the mediocre are some good pieces: hot tracker music, 3D dots, solid 3D vector shapes, rasters and plasma screens. Nothing wildly original.

STF Rating: 75%



● The best of *Phaleon's* myriad of sub-demos is the Illusion screen which shows off the STE's extra capabilities - one of which, apparently, is the ability to turn graphics all wibbly and be very smooth about it. Stereo music too, gasp.

ZODIAC'S SARCASTIC PARTY DEMO

The Source PD - Disk MUC 164

Zodiac's Sarcastic Party Demo, what a great title, though the demo itself is a less than inspiring affair. It's a step-through jaunt with tracker songs and scroll lines to read. Do we bother to read all the wibble? I think not. There are four pretty interesting modules, one crap chip dirge and some half decent graphics and sine wavy scrollers. Nothing particularly special, though - leave the party early, go for a pizza and then maybe onto a club.

STF Rating: 63%



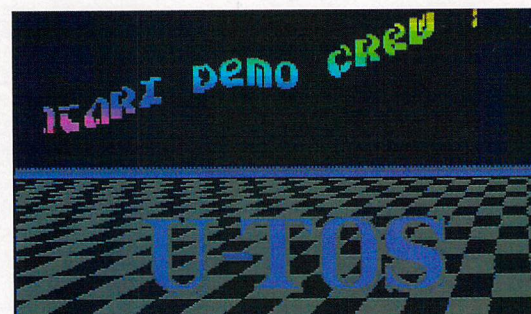
● *Zodiac's Sarcastic Party Demo*, a cheeky little demo with some half-decent tracker tunes and the usual text stuff. Er, why hasn't this female warrior-type armoured her bum? 'Cos then we wouldn't be able to stare at it - simple, really.

SUPREME DEMO

State 808 PDL - Disk MDEM 65

Big title, mediocre demo. Screens consist of tracker tunes and scrolling messages that only the hardcore demo fans and programmer's family ever read. There's a terrible joke that you might remember from middle school and, before you know it, you're at the end credits. Sounds aren't too bad, but it doesn't lift the demo from the realms of the ordinary.

STF Rating: 60%



● Now we all wanted to read a wibbly next line featuring a few irrelevant facts about the programmer, didn't we? The *Supreme Demo* isn't, it's more sort of OK-ish.

THESE ONES ARE ALL MINE

Working in the ST FORMAT offices and given the pick of ST software, our Cover Disk Editor still has PD disks lurking in the disk boxes. Here's his top tenneroo

1 **PACK ICE** Southwest Software Library: Disk 2016. Squashes files flatter than just about anything short of very heavy weights. Most Cover Disk programs are squished using this. It's fast, reliable and has no silly flashy bits when you decrunch files.

2 **FCOPY 3** Goodmans PDL: Disk GD 723. It copies, it formats and it scans for the dreaded CRC checksum errors - and we all hate those, don't we?

3 **SUPER BOOT** STF Cover Disk 36. Turns boot-up time into a positive joy. Pick your own Desktop information files, Desk Accessories, Auto programs, then per-

suaude a pretty picture and groovy sample to greet you. Warm and welcoming.

4 **REVENGE OF THE MUTANT CAMELS** STF Cover Disk 31. After a hard morning formatting, what better way is there to relax than thrash around wildly with a joystick shooting telephone boxes and sheep?

5 **TRENDY HANDY RANDY HENDY BENDY MANDY** STF Cover Disk 34. Everybody needs a Mandelbrot generator - after all, how else are you going to create those randomly colourful screenfuls of wacky chaotic maths? This is the fastest and grooviest of them all - indispensable stuff.

6 **SFX LZH GENERATOR** Goodmans: Disk 9D 701. Turns archived LZH files into rather clever self-extracting files that unpack in a trice with a zero hassle factor.

7 **MACCEL 3** STF Cover Disk 31. The standard mouse needs a helping hand to get up a bit of speed. This beauty is a combined mouse accelerator and screen saver - pop him into your AUTO folder and forget about him - a permanent fast friend.

8 **DC FREEZE FRAME** Goodmans: Disk GD1164. Want a grab of the screen? You want this, then, you do. Runs as a Desk Accessory and grabs the screen as a *Degas Elite* picture. Graphics ahoy!

9 **AKRA** Softville: Disk Game 34. High resolution version of *Breakout* with loads of goodies - and dead smooth to boot. Breaks up the word processing sessions a treat.

10 **AVINA BLUE** Budgie: Disk BU72. Blimey, this one scrolls fast. *Avina's* a horizontally-scrolling-smashing-into-walls and shooting things game worth a few sessions.

● To get hold of any of these disks from Public Domain libraries, look to page 48 for addresses and telephone numbers. If you want any of those disks from back issues and you don't have them, turn to page 40 for details of our back issue service.

UTILITIES

DBWRITER

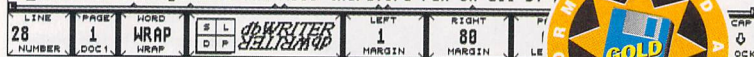
Floppyshop ST - Disk WRD 3124

dbWRITER was originally an experiment in alternative interfaces, long before my ZeST programs were developed. I wanted to create a custom graphic user interface that would closely resemble GEM and be portable to the IBM platform. I had written a simple text editor in my FontSwap2 program that I wanted to expand so it became the perfect vehicle in which to test my alternative interface ideas.

dbWRITER has been floating around in various BETA stages for quite a few months. This first OFFICIAL RELEASE comes as a result of much prompting by other users. dbWRITER has never seen any serious testing therefore I would appreciate your input when you are confronted with bugs. I hope to continue perfecting dbWRITER in my spare time as well as adding many new and requested features.

I have released dbWRITER in two parts. The dictionary file probably won't be changed for some time so you will only have to download it once. The main program and support modules will be released anytime an update warrants it. dbWRITER and all my past programs are freeware, you can copy them, sell them through the user group or upload them to local BBS systems. You use dbWRITER at your own risk.

dbWRITER is configurable and will therefore run on all STs.



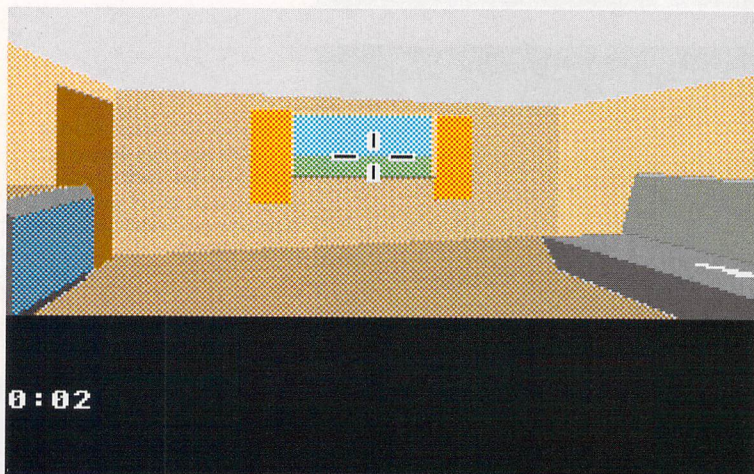
● **DbWriter is the best Public Domain word processor about, probably. An incredible mound of goodies as well as zippy operation equals utter delightfulness.**

DbWriter is a word processor, but what a word processor it is. It's fast, powerful and more fully packed with features than something that's really tightly packed with features, that's how feature-packed it is. Alongside the more mundane WP stuff are functions like a global search and replace, mail merge, spelling dictionary, printer preview, comprehensive text formatting, automatic word wrap, alphabetical sort and a whole host of others. Blocks can be highlighted with the mouse. A click of the right button and up pops a window full of block options. Menus along the top select all the other functions - each has a corresponding keyboard shortcut. You really need 1MByte to get at the juicier bits and a high resolution monitor to get anywhere. In the text-handling stakes, this is a serious mover.

STF Rating: 92%

RAMWORLD

LAPD - Disk M 107



● **It's so real you could almost step into it, couldn't you? Ramworld takes a series of numbers and transforms them into 3D worlds using a complex process known as maths. If you do try and step into it, you're really very silly, aren't you?**

Not the title of a trash sci-fi film, but a full 3D object creator. Once you've defined your world, you can enter it and wander about banging into walls. Objects are generated numerically and you're left pretty much on your own trying to figure out what things are going to look like. Vertices are entered using a series of numbers representing the x, y and z coordinates relative to an imaginary centre. Completed objects are popped into an imaginary world and "doors" are created to move from one section to the next. The interface is all keyboard and strictly no-frills, so frilly-seekers should look elsewhere. Low resolution pictures can be loaded in and used as a backdrop to your 3D creations, although the palette is fixed by Ramworld. Fun for serious twiddlers in three dimensions, but the rest of us probably want to stick to Lego™.

STF Rating: 64%

The **FORMAT** PD directory

● Where to go for Public Domain software - demos, games and utilities for around £3 a disk! If you write to any of these libraries for a catalogue, enclose an SAE. ● **Budgie games** are available from all PD libraries indicated by a (B). Simply mention the disk number (above the review) when you order the disk.

SOUTH OF ENGLAND

16/32 PDL, 35 Northcote Road, Strood, Kent ME2 2DH ☎ 0634 710788

Arrow PD, 6 Kents Orchard, Perry Street, South Chard, Somerset TA20 2QB

Atari Advantage, 56 Bath Road, Cheltenham GL53 7HJ ☎ 0242 224340

Awesomedemos, 3 Mason Road, Seaford, East Sussex BN25 3EE

B-Soft, 2 Oliver Drive, Calcot, Reading, Berks. RG3 5XN ☎ 0734 419981

Drake PD, 12C How Street, The Barbican, Plymouth Devon, PL4 0DA

EVDP, 15 Cleeve Road, Gotherington, Cheltenham, Glos. GL52 4EW

Freaks PDL, 29 Leap Valley Crescent, Downend, Bristol BS16 6TQ (B)

Gemini Shareware, 10 Warwick Avenue, Slough, Berks. SL2 1DX ☎ 0753 28183

Imageart, 19 Brenda Road, Tooting Bec, London SW17 7DD ☎ 081 767 4761

MT Software, Greensward House, The Broadway, Totland, Isle of Wight PO39 0BX ☎ 0983 756056 (B)

Merlin PD, 11 Grange Close, Minchinhampton, Stroud, Glos GL6 9DF

Merton PD, 10 Grassmere Avenue, Merton Park, London SW19 3DX

New Age PDL, 30 Anderson Estate, Lower Road, Hockley, Essex SS5 5NG ☎ 0702 232826 (B)

Paradise Computers, 11 Winfield Avenue, Patcham, Brighton, East Sussex BN1 8QH

PD Essentials, 22 Fern Avenue, Mitcham, Surrey CR4 1LS

PDSSC, 5 Walnut Close, Barkingside, Essex IG6 1HE ☎ 03548 448

ProBUS, Birchy Hill, Sway, Lymington, Hampshire SO41 6BJ

Prophecy PD, 390 Coulsdon Road, Old Coulsdon, Surrey CR5 1EF ☎ 0737 554536

Public Dominator PD Atari, PO Box 801, Bishops Stortford, Herts. CM23 3TZ ☎ 0279 757692 (B)

Public Sector PDL, 50 Ripon Road, Stevenage, Herts. SG1 4NA ☎ 0438 364722 / 361324

Riverdene PDL, 30a School Road, Tilehurst, Reading, Berks RG3 5AN ☎ 0734 452416 (B)

Senlac, 14 Oaklea Close, St Leonards On Sea, E. Sussex TN37 7HB ☎ 0424 753070

Seven Disk, Digswell Water Lodge, Digswell Lane, Welwyn Garden City, Herts AL7 1SN ☎ 0438 840456

Softville PD, Unit 5, Stratfield Park, Elettra Avenue, Waterlooville, Hants PO7 7XN ☎ 0705 266509 (B)

Solent Software, 53 Rufus Gardens, Totton, Hants. SO4 3TA ☎ 0703 868882

South West Software Library, PO Box 562, Wimborne, Dorset BH21 2YD (B)

ST Adventurers PDL, 32 Merrivale Road, Rising Brook, Stafford, Staffs ST17 9EB

Warzone PDL, 53 Ropewalk, River Street, St Judes, Bristol BS2 9EG

Wizard PD, 178 Waverley Road, Reading, Berks. RG3 2PZ ☎ 0734 574685 (B)

NORTH OF ENGLAND

Alpha Computing, 32 Meadow Drive, Halifax, W Yorks HX3 5JZ

Akore Shareware, 7 Fishergate Point, Lower Parliament Street, Nottingham NG1 1GD ☎ 0800 252221

D W Stables, Unit 1, Johnson's Shopping Centre, 29-31 Bond Street, Blackpool FY4 1BQ ☎ 0253 404550

Goodman PDL, 16 Conrad Close, Meir Hay Estate, Longton, Stoke on Trent, Staffs ST3 1SW ☎ 0782 335650 (B)

LAPD, 80 Lee Lane, Langley, Heanor, Derbys. DE7 7HN ☎ 0773 761944 (B)

Metropolis PD, 38 Howick Park Drive, Penwortham, Preston PR1 0LU ☎ 0772 748422

Nightshift PD, 50 Averill Road, Highfields, Stafford Staffs ST17 9XX

Page 6 Publishing, PO Box 54, Stafford ST16 1DR ☎ 0785 213928 (B)

PD ST Kier Bailey, 95 Elton Road, Sandbach, Cheshire CW11 9NF ☎ 0270 762520 (B)

Platinum Disks, 181 Anson Close, Padgate, Warrington, Cheshire WA2 0HJ ☎ 0925 820693

ST Club, 2 Broadway, Nottingham NG11 1PS ☎ 0602 410241 (B)

STing Public Domain, 23 Manor Grove, Westvale, Kirkby, Liverpool L32 0UZ ☎ 051 546 4640

The Source PD, 7 Shearwater Lane, Norton, Stockton-On-Tees, Cleveland TS20 1SH ☎ 0642 550896

Tower PD, PO Box 40, Thornton-Cleveleys, Blackpool FY5 3PH

TRuST PD, 18 The Park, Southowram, Halifax, HX3 9QY ☎ 0422 341606 (B)

SCOTLAND

Caledonia PDL, 250 Oldtown Road, Hilton, Inverness, IV2 4PT ☎ 0463 225736 (B)

The Circular PD Library, 14 Morrison Drive, Lennoxton, Glasgow G65 7BA

Floppyshop ST, PO Box 273, Aberdeen AB9 8SJ ☎ 0224 312756 (B)

Office Choice, Suite 14, Avon House, Town Centre, Cumbernauld G67 1EJ (B)

State 808 PDL, 3A Old Lanark Road, Carluke, Scotland ML8 4HW

WoolleySoft, Humblesknowe Cottage, Ramolye, Dunblane, Perthshire, Scotland FK15 0BA

WALES

Shoestring Software PDL, 78 Carmarthen Road, Swansea SA1 1HS

IRELAND

PD 4U, 4 Sintonville Avenue, Belfast BT5 5DG ☎ 0232 672338

OVERSEAS

Algemene ComputerClub Nederland (ACN), Postbus 5011, 200 CA Haarlem ☎ Holland 023 351100 (B)

Atari ST User Group Norway, c/o SA Jensen, N-3630 Rodenberg, Norway

Dom' Pubs, 10 Rue du Vergeron 38430 Moirans, France

LTPD, 37 Montye Ave, Box #2, Toronto, Ontario, M6S 2G8, Canada

Public Domain Corporation, 4320 - 196th SW, Suite B-140, Lynnwood, WA 98036-6721, USA ☎ 0101 206 745 5980 (catalogue £11)

ST-PLUG, 1670 Heron Road, Box 22026, Ottawa, Ontario, Canada K1V 0C2 ☎ BBS 0101 613 731 2779. (B)

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DEMO 132 - The Pandemonium Demo
DEMO 93 - Songs of the Unexpected - STE Only
DEMO 16 - Things Not To Do (very funny)
DEMO 45 - Decade Demo (some bad language)
DEMO 69 - Electra Reset Demo (1 meg)
DEMO 78-79 - Punish Your Machine Demo (£3.00)
DEMO 92 - Shamen Music Demo (1 meg)
DEMO 95 - Corporation Mega Demo - STE Only

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Sweet bird that shunn'st the noise of folly...

The long awaited new machine from Atari, the now almost legendary Falcon, has finally been revealed to *ST FORMAT*. The Falcon is so far in advance of anything else on the home computer market that no reasonable comparison can be made in terms of the new machine's audio, video and digital processing capabilities. The Falcon is going to be an absolute monster and could just take the market by storm.

BACK TO THE TOP

Falcon is the machine which is to take Atari back to the top of the home computer market. Rather than plumping for aged technology and a boring specification, they've come up with the most interesting machine in ten years of computer development.

You see, the ST changed the face of home computing. It took the humble micro beyond the ambitions of the keenest hobbyist and into the mass consumer market. Falcon continues this legacy, pushing the home computer firmly into the living room. It's a machine which creates a new standard. All machines are now going to be judged against Falcon's capabilities.

So, just what kind of applications can you expect to be using on Falcon? Given the fact that the machine has a powerful digital signal processing chip built in, these applications are likely to be graphically and sonically oriented. However, don't expect to see the same old things – what you're more likely to see are brand new programs.

MASSIVE POTENTIAL

Consider your hi-fi. If it cost you an arm and a leg, the chances are it has a graphic equaliser fitted – this can subtly alter sound by lifting or dropping frequencies. The Falcon could perform this equalisation – you just have to plug your hi-fi in the back, load up the software and tweak the frequencies by moving graphical sliders and your mouse.

Whole new areas of gaming could be opened up with Falcon's amazing graphic resolutions. With the 68030 chip running at such high speeds, programmers could easily create three dimensional games of superior quality. However, it needn't stop there.

Plug a CD-ROM into the back of Falcon and suddenly a brand new kind of game is possible. Software houses could render environments in amazing colours and then put these on to CD. Falcon can then access these via the DSP chip and play them back. Given the amount of information you can store on a standard CD (650MBytes), it would be possible to store stills from films, then overlay an ST generated graphic. In other words, you could really be in the movies. Falcon is the first in a whole new family of computers. The version we saw at the preview is

First we broke the news of the Falcon to the world, then we brought you exclusive specifications, now we bring you the full story of the machine that's practically a legend in its own launch-time. Andy Hutchinson and Clive Parker zipped up the M4 to check out the mythical machine

● *Wing Commander 2* on the PC uses a humble 256 colours on-screen at once from a palette of 32,678. Falcon could easily display the same number of colours from a palette of 262,144.



SCSI AT LAST!

The Falcon 030 now uses industry standard floppy and hard drives and interfaces for its data storage. The external hard drive connector is a fully implemented SCSI 2 port enabling standard SCSI and SCSI 2 drives to be connected directly – SCSI stands for Small Computer System Interface.

Floppy support is in the form of a 1.44MByte HD drive, enabling twice as much data to be stored as on a standard floppy disk. The most welcome addition is an industry standard IDE connection on the main circuit board enabling low cost IDE hard drives to be plugged in. There is no external floppy drive port but in most cases it is either not required or a hard drive is installed.

Given the amount of information you can store on a standard CD, it would be possible to store stills from films, then overlay an ST generated graphic – you could really be in the movies.

going to be the base model. It has 1MByte of memory and no internal hard drive. Later models are likely to have more memory and plenty of internal hard disk storage space. There will be options for co-processors, PC emulators and fax/modem applications.

Don't expect it to end with computers though. There's no reason why Atari couldn't stick an advanced Falcon in an attractive matt black case with a CD drive and release an interactive compact disk machine. This would enable you to input real-world sound and video (from your TV or video, for example) and then customize it with the usual text and graphics functions. Truly interactive CD is now possible with the newest Atari.

THOSE TECHIE SPECS

The version of Falcon we saw was in a dark grey standard STE case, though this may change by the time the final production version appears. The important bits of the STE have been retained – the MIDI ports and cartridge port – so all ST based music software which uses cartridge dongles or plug-in units can work perfectly on the new machine. Most of the external ports are still there – the parallel port is now a fully functioning two-way interface enabling PC-style flatbed scanners to be used, there's a nine pin modem port for comms purposes, there are the normal mouse and joystick ports, analog joystick ports, stereo in and out ports, a LAN network port, a TV port and a 17-pin D monitor port. Adaptors are available for the monitor port enabling you to use both Atari ST monitors and VGA monitors.

The main processor is the Motorola 68030 chip running at 16MHz with an option for a 16MHz 68882 maths co-processor, and the system operates at 3.84 MIPS (millions of instructions per second) – almost 16 times faster than the quarter of a MIP of the standard ST. There is a new version of the operating system in the machines (perhaps TOS v4?) which takes advantage of the new system hardware and supports MultiTOS, the multi-tasking version of TOS.

The machine is to be released in three memory configurations, 1MByte, 4MByte and a massive 14MByte of RAM. SIMMs boards are not being used for RAM storage, Atari are supplying their own plug-in

boards in all three RAM sizes. Prices of the new boards are to be about the same as SIMMs boards of a similar capacity – Atari see no need to price themselves out of the market over RAM.

There are nine different screen modes possible on the Falcon, all of them available on a Super VGA monitor. The three standard ST modes are supported so that ST monitors can be used with the machine – the only difference is that any two colours can be selected from the palette when in ST high resolution mode with the SVGA monitor. There are also two true colour modes and four VGA or video modes, see the Screen Gems boxout for details of resolutions and colours available. Genlocking synchronization is available in all screen modes, and live video can be displayed in a window on screen using the overlay modes. The Falcon is compatible with RGB VGA, RGB ST, composite NTSC, PAL, SEACAM and SCART monitors and TVs.

SOUND SOUND SUPPORT

Sound support is superb, supporting 16-bit 8-track DMA recording and playback (4-track stereo) at up to 50kHz sampling frequency – that's better sound reproduction than a CD player can offer. Audio output can be made through the external stereo jack socket or via the internal speaker, 16-bit DAC's (Digital to Analog Converters) ensure that the output sound quality is excellent.

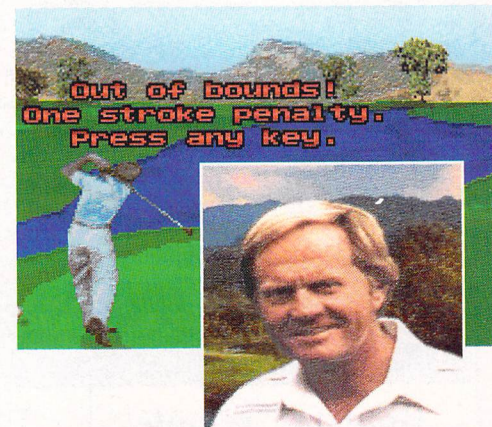
Sound can be input via a stereo microphone jack socket and sampled by the built-in 16-bit ADCs (Analog to Digital Converters) ensuring equally high quality. Another innovation is the ability to record samples direct to hard drive and compress sample data by a ratio of up to 4:1. Built-in SDMA (Sound Direct Memory Access) audio signal co-processors greatly increase the processing speed of audio data so that the main processors can also perform other functions. The other main point of interest is the internal expansion bus. This is in the form of a direct processor slot which can receive a 368SX processor for PC emulation purposes, and JPEG and MPEG co-processors to enable you to compress and decompress CD-ROM/full motion video. Indeed, the Falcon architecture has been designed in such a way that practically anything can be connected to it, be it on the motherboard or through a port. **stf**

THE SHADE OF THINGS TO COME...

Falcon is capable of displaying any of these PC games screen grabs at higher resolutions and in more colours. Oh – and it's quicker, too



● This is the chip that is causing other computer manufacturers to sit up and take notice of the new Atari Falcon 030. The DSP56001 can process digital information at fantastic speeds to enable video and audio data to be manipulated as you want.



THE SOUL OF A NEW MACHINE

The most important new component of the machine is the DSP56001 processing chip which we told you about in last month's news pages. DSP stands for Digital Signal Processor, so any kind of digital signals fed into it can be processed in real-time as you wish. The chip is fully programmable and has 96K of zero wait-state RAM built into it to accelerate processing operations.

An external DSP expansion connector enables peripheral devices such as standard Sony and Philips CR-ROM drives to be connected, with a potential 650MBytes of information capable of being stored on a standard 5 inch compact disk. CD-I, external DACs, external ADCs and any other S/PDIF (Sony/Philips digital interface) devices are also compatible with the DSP expansion connector. The DSP chip runs at a clock speed of 32MHz, twice as fast as the main processor, and it can also process information in parallel internally.

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640 x 200 pixels	2, 16 or 256 colours on-screen from a palette of 262,144
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ST answers

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WHAT ARE THESE PICTURES FOR?



BEGINNERS: This means you're only going to see some of the easiest stuff here – like which hole you're supposed to put the disk into.



HARD DRIVES: Answered here – all you ever wanted to know about those mysterious grey boxes that sit near your ST and whirr a lot.



DISKS: General queries here about those incredibly expensive pieces of plastic with round bits of metal in them. And what to do with them.



PROGRAMMING: Lots of these icons this month, covering both *GFA Basic* and assembly language. For any aspiring coders, this is the pic to look for.



GAMES: Well, the place you should really look for game tips is *Gamebusters*, but the odd hintette has also managed to creep in here.



SOUND: Anything vaguely MIDI or sequencer orientated is near this sort of icon. If you're a music buff – crowd around and see what's going down.

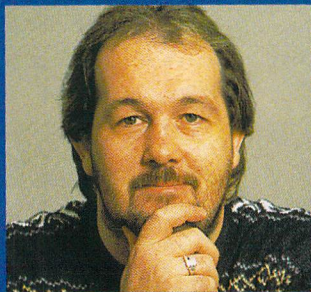


GRAPHICS: Pixels galore here, splash them around, make a glorious mess and then just hit <Delete>. All that and some serious stuff as well.



ST PROBLEMS: Misfits, general bits and bobs and things that didn't really fit into any other category are positioned by icons of this nature.

MEET STF's PANEL OF EXPERTS



Barrie Capel is famed for his 1972 Pickwick label release: *Pop Hits from Basildon*. He created it on his organ using preset rhythms. He knows about *GFA Basic*, too.



When faced with translating his diary into Sanskrit, *STF*'s technical writer Clive Parker did what any father would. He let his son translate it at Sanskrit class.

THIS MONTH – PROGRAMMING SPECIAL

If you're interested in programming, whether in *GFA Basic* or assembly language, this is the month for you. We've got a selection of questions and answers to answer almost everything you wanted to know about these languages. If you don't have *GFA Basic* v3.5 you can order it from page 40 – we gave it away with *STF* 35.



Sir Leaping-follicle – or Ed Ricketts as the electoral register knows him – has a blue Metro called Feisty which he keeps in Luton near to some old tramlines.



The music specialist, Steve Wright, occasionally seeks solace in a shed on his allotment. He likes Prokofiev and Tolstoy on alternate Tuesdays.



Tony Wagstaff, or Woney Tagstaf as he's never known, is an ordinary sort of chap who knows lots about assembly code. He once met Damon out of Blur.



GFA Basic

Programming Special

In many of the following questions and answers, lines of code are given to illustrate particular points. Often, these lines of code are too long to fit into our narrow columns, so we have used the ↵ symbol to indicate the fact that you should not insert a line return there.

KLICKETTY CLACK

David Bennett of Eastbourne wants to know how to turn off the keyclick in *GFA Basic* v3.

stf: Easy one, that...

SPOKE &H484, PEEK(&H484) AND NOT 1

turns the click off and...

SPOKE &H484, PEEK(&H484) OR 1

turns it back on.

EXECUTING FILES

Des Wilson from Derby wants to know what BASEPAGE and environment strings are.

stf: The BASEPAGE is a 256 byte look-up table used by the operating system when programs are launched. It's basically a list of data, such as the addresses of the DTA, BSS, and environment strings plus probably the most useful piece of information – the command line – or the bit you type in when you run an .APP file. A typical example would be running an .APP file and entering C:\MYFILE at the command line. The program can use this information by accessing it from the BASEPAGE.

Environment strings are also lists of data which are used to pass to the program being launched – a description of the current environment, variable names and disk access paths and so on. Programs are "run" from within *GFA* programs using the EXEC 0 command, which uses the following syntax:

```
EXEC (0,"filename",commandline$,environ-
string$)
```

Normally, the variables `commandline$` and `environstring$` are left null, (""), though the above descriptions should give you an idea as to what can be used. Your program must reserve memory for the program you want to run before you use EXEC, and, when you quit the program, control is passed back to it.

CODE VIOLATIONS

Michael Brown in Hinckley is having problems writing a database for a local scout troupe. When the length of the code exceeded 33K, he started getting bus errors, and when more code was added, peek/poke errors. He wants to know if there is a limit for the length of source code.

stf: The short answer is yes, but this probably isn't the problem in this case. There is no definite maximum size for BASIC source code – it depends on the available memory in your ST, which can, in turn, be as a result of many

things. Even a 4MByte ST can be left with little memory available for GFA Basic code if it is booted up with memory-hungry Accessories installed – especially if you are a hard disk user and put every TSR, patch and .ACC file possible on the C: partition.

Your own program can also be the cause of the problem if you have lots of DIM statements in it. For example, DIM A\$(100,100) eats up over 60K of memory, so use DIM A\$(37,28) if that's all you need. Add the rest of your arrays and dimensioned variables, then add it to the memory used by TSRs and ACCs, and you find less space for your source code than expected.

So if you suffer memory problems, boot GFA Basic from hard drive with everything disabled, or if you use floppies, switch on your ST with a blank disk in the drive before running GFA Basic.

To check this first, run GFA Basic as you normally would. When it's loaded press <Esc> and then type Print FRE(0) and press <Return>, note down the number that appears. Next disable all AUTO folder programs and Desk Accessories by renaming the file extenders, (for example, all ACCs to ACX and PRGs in the AUTO folder to PRX). Load GFA Basic and repeat the Print FRE(0) exercise again. You should be able to see a difference between the figures.

If there is no difference then you are already using GFA Basic with the maximum available memory – the problem lies elsewhere. If this happens bear in mind that the maximum permitted string length in GFA Basic is 32K, and exceeding this figure could be causing memory problems.

BOOKS ON PROGRAMMING

If you are learning GFA Basic v3 from scratch, any book on v2 can get you started. Computer Bookshops (☎ 021 706 1250) stock a wide range of programming books and GFA Data Media (☎ 0734 794941) have more advanced books for both v2 and v3 users.



Music and MIDI with Steve Wright

LIVE AND DIRECT

After reading about Hands On MIDI software in STF 30 I gave it a try and got excellent results. Is there any device which can reproduce my sequences "live" so as not to abuse my ST on the road?

Gordon Currie, Glasgow

stf: Dedicated MIDI File Players do exist – the first was Elka's CR-99. A recent one is Roland's SB-55 Sound Brush – it's designed to enable songs created on home sequencing setups to be easily converted for live or studio use, and comes with a remote control. Try your local hi-tech music shop, or contact Roland on ☎ 0792 310247

WHEREFORE ART THOU?

Where can I get my hands on the sequencing software Steinberg Pro 24 v3, since no one seems to sell it any more...?

Bill Moulford, Oxon

DIGITAL TO ANALOG

Can I record music I make on my 520 STFM using Sequencer One on to an audio cassette without using MIDI?

Cathy Rogan, West Yorkshire

stf: Pro-24 has been discontinued for some time, but it was getting a bit long in the tooth anyway. However, if you are still determined to get hold of it, try the classifieds in the hi-tech music mags, otherwise go for a more up to date alternative such as Steinberg's Cubase (£295 Evenlode Soundworks ☎ 0993 898484) or Gajits' Sequencer One Plus (£129.95 ☎ 061 236 2515) – see the review of this next issue.

Incidentally, all Steinberg products that are still available are being distributed by Harman Audio, call ☎ 0753 576991 for information.

stf: If you're not using MIDI, you must be using sampled sounds. The only way of getting these sounds out of your STFM other than through the monitor speaker is by using extra hardware. The Stereo Playback cartridge (£29.95 Microdeal ☎ 0726 68020) can do this. Unfortunately, you won't get far with Sequencer One, but upgrade to Sequencer One Plus and you can address the cartridge directly. STE owners needn't bother – there's a pair of audio connection sockets on the back of the machine.

TECHNICAL PROBLEM

1. When I use Sequencer One with my Technics KN800 and I press stop during a song, my Technics no longer sounds unless I switch it off and back on. How can I cure this?

2. Is there an 8-channel tracker for the STE?

Jonathan Rose, Dorset



READERS' TIPS

FONT LOADER

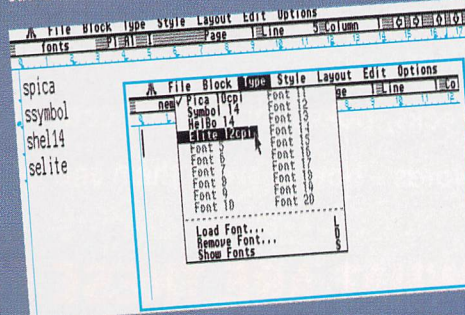


Les Bessant of Gateshead has a couple of easier methods of loading fonts automatically into Write On than the one offered by Garry Squires in STF 36. He gets this month's help-the-STF-reader special prize of £25.

1. Write On looks for a file called Fonts when loading, this file should be in the WRITE_ON folder. It is an ASCII file which can be edited by Write On and contains the name of the screen font that matches the default printer font installed. The default Epson font is called spica, for screen pica. You can edit this line to include whatever fonts you want to autoload. List each font name on a separate line with a CR/LF at the end of each line and save as an ASCII file. Make sure that you use the name of the screen font, without any extension. The next time you load Write On all your fonts are loaded for you.

2. Set up all the paragraph layouts you are likely to need

including fonts. Go to the Layout menu and select Save Layout with the name WRITE_ON.LAY in the WRITE_ON folder. The next time you load Write On the complete layout is restored, including the fonts.



● Once you have created the Fonts file and saved it (see the top left of piccie), Write On automatically loads in the fonts selected (as seen in the insert, bottom right).

```

NEXT c%
NEXT b%
NEXT a%

PRINT "All elements filled..."
PRINT
'
FOR n%=1 TO 20 ! print 20.
  random elements
  a%=RAND(50)+1
  b%=RAND(12)+1
  c%=RAND(1)+1
  PRINT "<" ; price$(a%,b%,c%) ;
;"> " ;
NEXT n%
PRINT "20 random elements printed..."
'
OPEN "O",#1,"ARRAY.dat" !
  open disk file for output
STORE #1,price$(a%,b%,c%) ! write array to disk
CLOSE #1 ! close channel

```



```

PRINT
PRINT "Array stored on disk..."
'
ERASE price$() ! erase array

DIM price$(50,12,1) !
re-create array again

PRINT "Array deleted and re-created..."
PRINT
'
FOR n%=1 TO 20 ! print 20
random empty elements
  a%=RAND(50)+1
  b%=RAND(12)+1
  c%=RAND(1)+1
  PRINT "<";price$(a%,b%,c%);"> ";
NEXT n%
PRINT
PRINT "20 empty elements printed,
(nothing!)..."
'
OPEN "I",#1,"ARRAY.dat" !
open disk file for input
RECALL #1,price$(),-1,x ! read
array (x=returns elements loaded)
CLOSE #1
PRINT
PRINT x;" elements loaded from disk..."
PRINT
'
FOR n%=1 TO 20 ! print 20
random price$() elements
  a%=RAND(50)+1
  b%=RAND(12)+1
  c%=RAND(1)+1
  PRINT "<";price$(a%,b%,c%);"> ";
NEXT n%
PRINT "20 sample elements printed..."
PRINT
PRINT "Demo completed - Press any key"
REPEAT
UNTIL LEN(INKEY$)
EDIT

```

The above example creates the array

stf: To answer your first question first but without going too deeply into it, this sort of problem is quite common. It stems from the fact that there are numerous different types of MIDI message which may be transmitted when the stop button is pressed, and keyboards vary in how many of these messages they can handle. Unfortunately, you normally just have to live with this difficulty but check the following things first:

- Look under your Options menu and check that Sync Send is switched off.
- Also under MIDI Options, if the Mode Messages are set to Send All Keys on all channels, try switching them to All Notes Off.

And in response to your second query – the simple answer is no. The ST plays a maximum of four samples at a time. Where stereo output is available (as on the STE) this amounts to two samples for each output (two Left and two Right), otherwise the four samples are heard in mono.



It makes the peas taste funny...

Inevitably there are some slightly more unusual questions that we find a tad more difficult to answer. Do you have a sensible reply to any of these?

¿QUE?

Porque no traducen esta magnífica revista al Español pues hay mucha gente interesada, pero no domina el Inglés. Saludos y felicitaciones por el buen trabajo que están haciendo.

En España no hay una revista tan buena y completa como esta. Tradúzcanla "please."

Spain

stf: Unfortunately none of our experts is totally familiar with your language, but at a guess it looks as if you want us to translate ST FORMAT into Spanish. Making wild stabs in the dark like this, however, wouldn't really be the best way to translate the magazine into a different language. If anyone else would like us to become multi-lingual, though write and let us know.

MONITOR MYSTERY

I have just bought a 520 STE and I have connected it to a Commodore monitor. Is it breaking?

Gloucestershire

stf: No.

BEST MACHINE

What is the best and cheapest computer to run your

price\$(50,12,1) and fills it with values. The contents of 20 random elements are printed. The array is STORED to disk and then erased from memory. 20 random elements are shown again, but this time are empty. The array is re-dimensioned, and the contents are then

Write On word processor disk on? I am confused about which one to get.

Northants

stf: Hmmm, let's see. The Atari ST is probably your best bet.

DISK COPY

I have a 520 STE and an external drive. Could I back up my disk via ST Writer rather than keep taking the disk out of the STE's drive each time?

Suffolk

stf: Yes... or no. What exactly do you mean? Use the magnificent Back Up program that we supply on every Cover Disk.

CASPER STRIKES AGAIN

While typing information into my ST using Write On, I found that at various intervals it continues to type automatically. It does not stop until I switch off my machine and start again, why is this?

London SE12

stf: If the machine is repeating keys or random letters then you either have sticky keys or a joystick plugged in with autofire switched on. If your machine is typing sentences, paragraphs and chapters, then we suggest you consult the relevant authorities about getting it exorcised by a priest. Alternatively, if the material being produced is of good quality you could get it published in one of the daily tabloids.

RECALLED from disk, with 20 random elements being displayed to demonstrate the successful load. STORE uses the syntax STORE #n,var\$(),m. n is the channel used with the OPEN command, var\$() is the name of the string array, (use the open/close brackets, but

MASTER CONTROL

I'm going to buy a Roland PC-200 Keyboard Controller to use with Sequencer One. Could I use Sequencer One's samples to play back tunes entered on the controller? If so, what would the results be like compared to those if I also had a sound module?

Matthew Trowell, Middlesex

stf: You can use the PC-200 to control Sequencer One's samples, but the results would be improved with a sound module, both in terms of having the extra sounds and getting the superior sound quality that the module would have. You may want to consider getting a multitimbral keyboard, thus effectively combining the keyboard controller and sound module in one unit, and possibly saving money.

ME AND MY PIANO...

I have a Technics PX44 piano and an STE. My piano has six on-board piano sounds. I'm looking for synth

and organ sounds, but the sampled sounds with Sequencer One only sound effective across about two octaves and are of poor quality. Is there any cheap way in which I can use STE's or the Technics' sound chip to provide quality sounds for my piano?

Richard Wall, Kent

stf: It is sometimes possible to add extra sounds to an instrument, and some keyboards' sounds can be edited via MIDI using patch editing software. However, your keyboard is designed to produce piano sounds, so it can't be expected to behave like an organ or a synth without some pretty major hardware modifications.

As for using the STE's sound chip – you're unlikely to get the kind of sounds you're after, so if sampled sound from your STE is not of sufficiently high quality for your needs and you're on a tight budget, your best bet is to look for a second-hand MIDI instrument to add to your setup.

don't enter the number of elements). `m` is the number of elements to save, though this is optional and if left out all elements are saved.

RECALL is virtually the same syntax; **RECALL** `#n,var$,m,x`. `m` is now the number of elements to load. If `m` is set to -1 then all elements load, and the additional parameter `x` (on completion of the **RECALL**) contains the number of elements loaded.

DEMO MAKING

S Widdrington in Peterborough, along with many other budding demo makers, wants to know how to create a program that appears automatically on boot-up which displays a picture, (a Degas PI1), with scrolling text at the bottom and a menu which would enable you to load programs by pressing a single key.

stf: You can do this with GFA Basic but there are limitations. The problem is not so much with the language but with the way the ST works. When you switch on your ST a number of things happen, one of which is the checking for the existence of an AUTO folder. If there is one then any executable files (.PRGs) found in it are run in the order they were placed there. Therefore, if we place a compiled .PRG file in an AUTO folder, it runs automatically, solving the load on

boot-up problem. However, all this happens before GEM is installed – without it all GEM functions are disabled. AUTO folder programs only use the basic operating system and are called TOS files.

Demo writers writing in assembly solve the problem of the mouse being disabled by writing and installing their own routines. All is not lost, you can still load graphics to the screen, print text, use the keyboard and execute disk files. If you want to auto-run programs that need the GEM mouse routines then you must let GEM load and use a program called Startgem (included with Superboot 7.4 on STF Cover Disk 36) in the AUTO folder which will run a specified GEM program.

Assuming that you have decided to use the AUTO folder method, your program can have a picture in an **INLINE**, **MOVE**ing it to the screen area when required, set the colour palette, and print text messages to the screen. The keyboard can be scanned and programs launched with the **EXEC 0** command when the correct key is pressed. On exiting from the TOS program you return back to the menu screen.

The example file **BAZMENU.GFA** (and **.LST** source) on this month's Cover Disk is a simple example of this method, but differs from most menus in that the same file works in any AUTO folder on any disk – it automatically looks on

the disk to see what .PRG files are there before creating the menu list. But, as mentioned before, GEM is not installed so any programs launched which need a mouse won't work.

SECURE?

On the subject of accessories and AUTO folders, **Jeremy Stuart** in Shere is producing an Accessory password program in GFA Basic v3. If you type the correct password you go to the Desktop. He's placed the compiled .ACC in the AUTO folder but he doesn't know what he has to load to get to the Desktop – all he gets is a blank screen. He also asks if there are any commercial password programs available.

stf: The first thing to point out here is that .ACC files do not go in the AUTO folder, they should be placed in the root directory of the disk being booted. Password programs should be compiled .PRG or .TOS files and placed in the AUTO folder. The ST first runs any files found in the AUTO folder, then loads GEM and then installs any .ACC files. Therefore GEM loads automatically when you exit the password program. Your password program should contain a **REPEAT...UNTIL** loop which is exited from only when the correct password is entered. A simple **END** outside the loop means that when you exit, you go to the Desktop:



Assembly pointers

Tony Wagstaff again answers your assembly language queries

BASIC COMPILER

Can I use the STOS Compiler for FirST Basic, or is there a PD BASIC compiler?

Simon Nash, Chelmsford

stf: Afraid not, Simon. BASIC compilers are about the only type of application not available in the Public Domain. You can obtain the GFA 3 Compiler at a special price of £25 using the form that appeared in ST FORMAT 35. See page 40 for details of ordering back issues.

ACCESSORY PROBS

Terry Conway from Mansfield and **Dave Griffiths** from the Wirral are both having problems with the Accessory shell, **ACCHEAD.S**, that we included on Cover Disk 33. After inserting his own code, Terry finds the ST keeps re-booting. Dave's works fine until he selects it, after which he can't access the menu bar at all. Dave has managed to insert a yes/no option into the dialog box, but it cannot detect which button he chooses.

stf: You both say that you've added your own code to the listing. Without seeing what this is, it is difficult to guess what is going on. As it stands the listing should work; try compiling it without any alterations, and re-boot without any other AUTO programs or Accessories on your boot disk. If this works, then at least you know the main listing is OK. If not, then do you have a joystick attached with auto-fire

switched on? This causes the menu options to freeze up. If the problem lies in the code that you've added, the following pointers may help. At boot-up, all Accessories are run, and have first to install themselves, which is what the lines one to 50 of the code do. If you enter any code in this section, chances are the system is going to re-boot when you call the Accessory.

The Accessory then enters an endless loop, during which it calls **event_multi**; this is basically a request to keep it posted if anything interesting happens. Control then returns to GEM, and the Accessory hangs in limbo (sounds a bit like the twilight zone). When something does happen, such as a menu selection, GEM sends a message to everyone who asked for one. The Accessory has to check if the message is intended for itself. If not, it requests another alarm call, and goes back to sleep. If the message contains the handle of the Accessory, then it leaps into action. It is at this point that it performs your routine, so install it at the line beginning **op_work**, at the earliest. Adding extra buttons is simply a matter of changing line 163 to something like

```
alert_msg      dc.b      "[0][HOORAY][but-
ton1|button2|button3]",0
```

After **form_alert** has been called at line 110, **intout** contains the number of the button selected. So the following line

```
move.w         intout,d0
```

results in **d0.w** containing one, two or three, depending on which button was selected.

ATARI RULES

What's the best book I can buy to find out where all the GEMDOS routines are, and how to access them according to Atari's rules?

Dave Griffiths, Wirral

stf: Sounds like you're after the information contained in the **SYS_VARS.IS** file which came with GFA Assembler in issue 33 (turn to page 40 if you missed it). If you've a few bob to spare, Atari can supply you with details of their documentation package, Doc Support Kit. Atari can be contacted on ☎ 0753 533344.

BBC BASIC

Is there a BBC emulator for the STE?

Scott Butler, Worcester

stf: There is a BBC emulator which New Age PDL (☎ 0702 232826) can supply on disk UTIL #9 for £1.50.

THE LISTENING BLANK

How do you create the multi-coloured backgrounds seen in games like Gods?

Simon Kongialis, Cornwall

stf: You have to use something called "blanking" – either horizontal or vertical. To increase the number of colours on the screen it is best if you use both directions together. The screen is drawn using an electron gun, line by line, from the top left to bottom right, at which point the gun has to be aimed back to the top corner. The time taken to reposition it is called a vertical blank. During this time, the


```
CLS
REPEAT
  PRINT "Please Enter The Password";
  INPUT I$
  IF I$<>"EUREKA"
    PRINT "Incorrect Password.␣
- Access Denied"
  PRINT
  ENDIF
UNTIL I$="EUREKA"
CLS
PRINT "Password Correct"
PAUSE 100
END
```

You can tidy this up and format the output to print messages in the centre of the screen and so on. We don't know of any, although Ladbroke Computing International (☎ 0772 203166) can provide the ST Secure combined hardware and software system for £19.99.

LOCKUP

Andy Gray from Birmingham wants to know how to get his ST to default to caps lock on so all his typing is in capitals, and also how to input a single key.

stf: The caps lock problem can be solved in one of two ways. The first is to use the `XBIO$()` call at the start of your program to switch caps lock

on, and `XBIO$()` to switch it off. The drawback of this method is that you have to use the `XBIO$` call to switch caps lock on or off every time you want to change to upper or lower case letters.

Alternatively, you could use the `UCASE$` function. For example, if instead of `INPUT A$` you used `INPUT UCASE$(A$)` and you enter "my name is fred," then it is converted to upper case automatically and stored in `A$` as "MY NAME IS FRED." To input a single character use `INKEY$` so that the program does not stop for the input, and immediately after the `INKEY$` line put an `IF...THEN` loop. For example:

```
INPUT A$
IF A$="s"
  INC Speed%
  ' Put what you want to happen.␣
when you press
  ' the s key on these lines,␣
as they will be
  ' ignored when other␣
keys are pressed.
ENDIF
' continue with your program here if s
is not pressed.
```

● If you have any queries of a GFA Basic programming nature, write to ST Answers, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW.

CROSS-SPECIES INFECTION



Is it possible for a PC to catch a virus from an ST and vice versa?

R S Davies, West Midlands

stf: It is possible for an ST virus to infect a PC disk because the formats are so similar, but the virus couldn't infect the PC itself because it would be written in 68000 machine code, which cannot be read by a PC-compatible machine. The same reasoning applies to PC viruses infecting the ST. The only time a PC virus can be read by an ST is when the ST is running a PC emulator, so normal virus precautions need to be taken.

DRIVE UPGRADE REQUIRED



Where can I get a hard drive for my Mega STE? Can I use the TT's VGA colour monitor with the Mega STE and with the Supercharger SC Plus 286 PC

emulator?

Dwayne Kee, Essex

stf: The Mega 2 STE and the Mega 4 STE come complete with ACSI (Atari Computer Systems Interface) to SCSI (Small Computer Systems Interface) host adapter board and 48MByte SCSI drive. Unfortunately the Mega 1 STE is not equipped with a SCSI adapter, so you cannot

ST looks through a list of routines stored in memory and performs each in turn. If you want it to run a routine of your own, you need to add the address of your routine to the list. Once installed, the routine runs automatically each time the screen is updated.

Horizontal blanks occur each time a line of pixels has been drawn on the screen. If you insert a routine that changes the palette every horizontal blank, you can have a different set of colours for each line. You need to program the MFP 68901 chip directly to tell it you want to use a horizontal blank routine. You also need to tell it how often – every 16 lines, for instance – and this should be performed by the vertical blank routine otherwise the palette may appear to scroll up the screen.

The following listing shows how it's done:

```
_vblqueue equ $456
nvbls equ $454
vdr_colour_0 equ $FF8240
isra equ $FFFA0F
tbcdr equ $FFFA1B
tbdr equ $FFFA21
  clr.l -(a7)
  move.w #32,-(a7)
  trap #1
  addq #6,a7
installvbl
  move.l _vblqueue,a0
  add.l #4,a0
  move.w nvbls,d1
  subq.w #2,d1
any_room
  move.l (a0)+,d0
  dbeg.w d1,any_room
  cmp.w #ffff,d1
```

```
bne install
rts *exit if there's no room
install
  move.l #vbl_routine,-(a0)
  move.l #hbl_routine,-(sp)
  move.w #0,-(sp)
  move.w #0,-(sp)
  move.w #1,-(sp)
  move.w #31,-(sp)
  trap #14
  add.l #12,sp
vbl_routine move.b #100,tbdr
  move.b #8,tbcr
  rts
hbl_routine movem.l a1-a2/d0-d1,-(a7)
  move.b flag,d1
  btst #0,d1
  bne other
  move.l #pal_1,a2
  bra Setflag
other move.l #pal_2,a2
Setflag bchg #0,d1
  move.b d1,flag
  move.l #vdr_colour_0,a1
  moveq #7,d0
set_pal move.l (a2)+,(a1)+
  dbra d0,set_pal
  bclr #0,isra
  movem.l (a7)+,a1-a2/d0-d1
  rte
flag ds.b 1
pal_1 dc.w ...
pal_2 dc.w ...
```

Insert your palettes into the last two lines, load your picture onto the screen, and call the routine. Experiment with the figures in the `vbl_routine`.

LOADING STOS

I have written and compiled a program using STOS. I now need a machine code program to load a picture onto the screen, and then run the main program.

C Rolls, North Wales

stf: Cover Disk 33 contained a routine, `DEGAS_LD.S`, which loads a Degas picture onto the screen. To run your compiled program, add the `TOS Pexec` call to the listing:

```
clr.l -(sp)
move.l #command,-(sp)
move.l #file_name,-(sp)
clr.w -(sp)
move.w #$4b,-(sp)
trap #1
lea 14(a7),a7
```

Insert this just before the line "exit cleanly" and then insert this:

```
file_name dc.b "MYPROG.PRG",0
command dc.l 0
```

right at the end of the listing. You could develop this to ask for a keypress, and then run various programs depending on what the input is.

ERROR HANDLING

What is TOS error #3?

Rees John Clissold, Leicester

stf: This error occurs when there are too many files open for the system to cope with.



No-flicker graphics using GFA Basic

Barrie Capel shows you how to avoid flickering graphics

When sprites move on the screen over an existing picture, there's quite a lot of flickering. To prevent this you have to do something called "page-flipping"

All data is not fixed in the memory of your ST. Its position depends on the ST being used, the available memory, whether or not Accessories are loaded and so on. The ST's operating system keeps track of things by using system pointers – memory locations which contain the addresses of relevant blocks of data. Normally, these pointers are used only by the ST itself, and the normal user need never know anything about them. When writing your own programs in GFA Basic you can use many of them to your own advantage.

To find out where something is, look at the relevant pointer – this tells you where to find the information you want. To make things easier on the ST, you don't even have to remember the addresses of all the pointers, because each one has a name and system call. A good example is the ST's screen memory which can vary in position at the top of memory from one ST to another. As far as the ST is concerned, the screen is actually two blocks of memory, each one 32,000 bytes long. This is true, regardless of the chosen resolution, because decreasing the number of pixels in lower resolutions is balanced by the increase in memory required to store the extra number of colours.

One of these 32K blocks of memory is called the physical screen – the area that the ST displays on the monitor, and the other is called the logical

screen – where the picture is built up before being passed to the physical screen. Both the physical and the logical screens have pointers which contain their current location in your ST's memory.

XBIOS(2), (known as physbase), returns the current start address in memory at which the physical screen can be found, and XBIOS(3), (known as logbase), returns the current start address at which the logical screen can be found. It's normally at &H78000 or &HF8000, but you can't rely on either without checking the system pointers first. You must use these calls – don't assume that all ST's have their screen memory in the same place that yours does.

When you switch on your ST, the two pointers contain the same address, (pointing to the same 32K block of memory), but because the pointers are in RAM they can be loaded with any number. This makes it possible to force the ST into using two different areas of memory for the two screens. You can then look at one screen while drawing something on the other, then swap the contents of the pointers making the other screen visible. Doing this still causes sprites to flicker when placed on the screen, but because this happens on the hidden screen, you don't see it happening. The newly hidden screen is then drawn on before being switched again, and so on.

This all happens many times a second with GFA Basic, and careful programming can produce some excellent results. Load your copy of GFA Basic v3 from STF Cover Disk 35 and type in the following v3 listing.

```
DIM screen_mem%(32255/4)
s2%=XBIOS(3)
s1%=(V:screen_mem%(0)+255) AND &HFFFF00
HIDEM
```

```
DEFFILL 6
~XBIOS(5,L:s2%,L:s1%,-1)
BLOAD "PICNAME.PI1",XBIOS(3)-34
~XBIOS(6,L:XBIOS(3)-32)
SGET s$
SWAP s2%,s1%
~XBIOS(5,L:s2%,L:s1%,-1)
'
WHILE INKEY$=""
  SWAP s2%,s1%
  ~XBIOS(5,L:s2%,L:s1%,-1)
  VSYNC
  SPUT s$
  MOUSE x%,y%,z%
  PCIRCLE x%,y%,15
WEND
'
s1%=MAX(s2%,s1%)
VOID XBIOS(5,L:s1%,L:s1%,-1)
SETCOLOR 0,7,7,7
SETCOLOR 2,0,7,0
SETCOLOR 15,0,0,0
END
```

So what does it all mean?

As you can see from the listing, the first thing you do is to create an area of memory for the second screen. Data moves around in memory, so we allocate space using an integer array which we can locate at any time by using the V: command (the GFA v3 version of VARPTR). The screen is 32,000 bytes long, but it must lie within a 256 byte boundary in memory for the ST's video routines. So, to be certain that somewhere within the array there is to be a 32,000 byte block which starts and ends on a 256 byte boundary, we add 255 bytes making a total of 32,355.

Integer array variables use four bytes per ele-

just plug a SCSI drive in. Best Prices can fit a 48MByte drive in your machine – contact them on ☎ 0903 700714 for details of how much it costs to do this and whether they have any available.

The TT colour VGA monitor is not actually compatible with the Mega STE because the STE only has the normal RGB, composite video and television outputs. Unfortunately, the Super-charger PC emulator is not available at the moment in the UK.

AMOEBAS TO ST TRANSFER



Can you tell me how to transfer files from the Amiga to the ST? I wish to transfer IFF pictures. Is there a lead which can do this?

Leon Matthews, Morley, W Australia

stf: We printed details of the Amoeba to ST null modem lead in STF 35, along with the details of file transfer between nine other machines and the ST, so refer to that issue or get yourself a

copy by looking at page 40. Any semi-decent comms package should enable you to transfer files between the two machines.

Recommended programs are Vanterm on the ST and N-Comm for the Amoeba. Both programs are PD or Shareware. Vanterm can be obtained from the ST Club (☎ 0602 410241) on Disk COM.27 for £1.45. N-Comm can be obtained for 99p on Disk U107 from Ultimate PD, 44 Festiniog Road, Gabalfa, Cardiff CF4 2SQ.

THE SECRET OF THE SECRET OF MONKEY ISLAND



I'm stuck! Having bought the boat and sailed off, the crew have mutinied and refuse to get off their deck chairs. Help!
John Talbot, Sussex

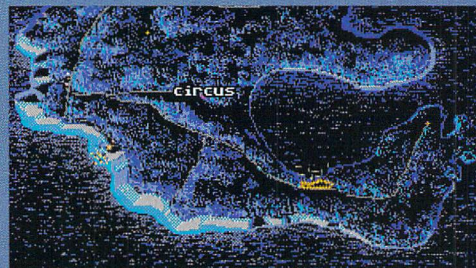
stf: Ignore the crew. Have a look around the ship. You need to find a recipe and then the ingredients to that recipe, then use the cannon on the deck. Open the drawer in the cabin to find a diary. Read this and notice the book-mark is made from the top of a cereal packet. Toddle off to the kitchens, open the cupboard and get a cereal packet. Use the cereal – eat it, in other words – and you get the free gift. Examine it – it's a key. Use the key in the cabinet to find a chest. Open the chest to get the recipe. Now you're on your own...

How do you get the banana picker out of the hut?
T Moorcroft, Wirral

stf: You need to get the wimpy little idol from the Monkey Head area and give it to the cannibals. They leave the door of the hut open and you can get the picker out.

At certain points in the game I get the message "Heap full! Game over." What's happening?
K F Vaughan, West Glamorgan (and a few others)

stf: You have an early version of the game with a bug. Return it to US Gold, Units 2&3 Holford Way, Holford, Birmingham B6 7AX, asking for a replacement, and they should give you one.



● **The Secret of Monkey Island is given a more thorough treatment in this month's Gamebusters – turn to page 88 to check it out.**

ment, so we divide our 32255 by 4 to arrive at the correct size to dimension the array. In the program, the array is called `screen_mem%`.

The next job is to store in the variables `S1%` and `S2%` at the start addresses of our two screens. For `S1%` use the existing physical screen address (physbase) which is returned by `XBIOS(2)`. For `S2%` we need the address of the array `screen_mem%` which contains the new logical screen we've just created, the start of which is returned by `V:`.

But as mentioned earlier, we need the first address which falls on a 256 byte boundary, and that may not be the first byte in the array. However, if we take the start address of element 0 of the array, add 255, then AND it with `&HFFFF00`, the result just happens to be the address of the first byte which is divisible by 256.

The actual switching of the screen addresses is done with:

```
-XBIOS(5,L:physadr,L:logadr,res)
```

which needs to have the logical and physical screen addresses as long words, (see jargon buster panel), and the screen resolution. (-1 for any of the parameters means no change in the existing value).

After this call, you're still looking at screen 1, but any screen output from your program goes to screen 2. At this point you can load in your background picture unseen to the hidden screen, and capture it with `SGET S$`. This method can be used to load screens of sprites and cut them out with `GET` while the person running your program stares admiringly at your load-in screen.

In the example you must replace `PICNAME.PI1` with the name of any Degas .PI1 picture you have and put the picture in the same directory as

GFABASIC.PRGM. Your graphics are then placed on the screen, either as a sprite, or, in this case, simply drawn on the screen with graphics commands. The two screen addresses are then swapped before the `XBIOS(5)` call is made again to bring the second screen into view. Now, the first screen is hidden, and we can use `SPUT S$` to put the background on it, and place the graphics in a new position.

This procedure is repeated many times per second in a loop to produce realistic flicker free animations.

Note: Obviously, there is a limit to the number of things you can do between each "flip" before your program slows down too much.

If too many `SGET` and `SPUT` operations are performed, or if the graphic blocks being moved are very large then the program slows down noticeably. Reduce the number of `PUTs` and reduce the size of the blocks of graphics data and the program speeds up considerably.

When the program has finished, you need to reset both screen addresses back to their starting values, but as you have been continuously swapping the values of `S1%` and `S2%`, you don't know for sure which one contains the original `XBIOS(2)` address. Fortunately we know that the ST always creates its screen at the top of available memory, so the original screen address is always going to be higher than that of our own created screen. We can use GFA's `MAX` function to determine which variable has the highest screen address.

This is the original `XBIOS(2)` value, so we place it in `S1%` and call `XBIOS(5)` one more time with the variable `S1%` for both the logical and physical screen addresses.

There you have it – page flipping by numbers, the ST FORMAT way!

WHAT'S ONE OF THOSE?

ADDRESS: Apart from being where you live, it's where data inside your ST lives. Memory inside the ST can be thought of as hundreds of thousands of "boxes," each capable of holding a number. In reality, each "box" is made up from a number of switches which group together to form binary patterns of 1s, (switch is on), and 0s, (switch is off).

The pattern created denotes the number stored, and your ST interprets the numbers as instructions or data depending on the situation. So that your machine knows where to find things, each of the "boxes" is numbered and it is this number which is known as the address.

L: Eight binary Bits on an ST equals one Byte. On 16-bit computers, two Bytes make a Word. On the ST, two Words equal a Long Word (four Bytes). Calls to the operating system require that the parameters be passed in a certain way – each piece of information a certain size in bytes. The information is collectively called a structure. If a parameter needs to be a Long Word, it is passed to the call with `L:` in front of it.

MEMORY LOCATION: Just another word for the "boxes" mentioned above.

OPTIMISATION: The re-writing of parts of a program to increase its speed or effectiveness. Unwanted parts can be removed, and variable types can be changed to faster types.

RAM: Acronym for Random Access Memory – the area of memory where program information is stored.

REGISTER: Area where 32-bit information is stored temporarily for processing.

CRACKED UP



I sent for Crack Art after seeing the review in STF 34 but I can't load in any pictures saved using any other art packages. I've tried by using Degas, Neochrome, Canvas and Paintpot pictures but none works. Have you any suggestions?

Simon Wells, Herts

stf: Our copy works fine with every picture we have tried to load into it from other packages. You may have a corrupted copy of the program. Return the disk to the PD library you got it from and ask for a replacement copy.

TIMESWORKS FREE



I want a graphics program to use with Timeworks DTP but I don't wish to spend more than £40 to £50. Is Degas Elite suitable and has it ever been reviewed by ST FORMAT?

David Collins, Surrey

stf: Degas Elite saves its files in PI? format, which can be imported into Timeworks, as can IMG format files. Degas was reviewed in STF 30 and scored a rating of 90% – if you want to order that issue, see page 40. Degas is still one

of the best art packages around and one of the easiest to use. It costs £25.99 from Electronic Arts (☎ 0753 549442).

AUTO FOLDER



I would like to know how to put an ordinary text file into an AUTO folder so it comes up on-screen when I load it.

Andrew Donald, Merseyside

stf: Unfortunately you can't display text files in this way. When you switch on your ST, one of the first things it does is look inside the AUTO folder, if there is one, and execute any files with a .PRG extension that it finds there. It ignores anything else that might be there. You would need to write a program yourself that loads the file and displays it.

HOW DO YOU DO THAT?



Mark L Posvar from Huntington Beach, California, asks how we get the screen shots of games which we use in our Screenplay section of the magazine.

stf: There are several methods, but most often we use an ST or STE with its monitor RGB out-

put connected to a Macintosh 2cx via a magical device called a Radius graphics board. The output from the board is piped into the Mac, where a program called Theatrics displays the ST display in real time in a window. This window can be grabbed at any point and saved as a PICT2 format picture to a Mac floppy. This picture can then be loaded into our DTP software. So now you know.

HAD AN IDE



I have been offered the chance to buy an IDE Smart Drive. Is this compatible with my STE?

Richard Single, West Midlands

stf: No, it is not compatible with your machine because it is designed for use with PC compatible machines.

WHAT'S THE DELAY?



If you have problems auto-booting your hard drive, upgrade to TOS v2.06. When v2.06 starts up the system, it uses an automatic built-in delay of over one minute so that the hard drive to get up to speed before booting. It ends the need for delay programs

to be run from floppy disk. Why does TOS v2.06 have this delay on booting?

Kevin Creasey, Leicester

stf: This is to enable networked machines to be "found" by the file server – the machine controlling a network. File servers are renowned for being very slow to link to terminals.

FILTH AND CORRUPTION



I recently used a PC emulator program to load Wordstar Express. When I tried to install the program on my Mega File 30 hard drive, I lost all my files and had to re-format it. Are all PC programs likely to do this?

Daniel Davies, Gwynedd

stf: Most PC emulators enable you to assign one partition of your hard drive as a PC partition. This is because ST and PC hard drive partitions use different formats, so the PC emulator cannot read or write to an ST format partition. Check your emulator's documentation for details on assigning a PC partition.

IT'S ALL ASCII TO ME



I am having problems loading ASCII files into First Word, what do I have to do to get them in?

Abi Hicks, Kent

stf: First Word is fussy about some ASCII files – you need a utility to strip out any non-ASCII characters from the file. Disk WPR.09 from the ST Club (£1.65 + 0602 410241) contains TOASCII which does this.

HYPERPAINT FORMATS



In Hyperpaint there are various picture formats: Neo, Degas and IMG. What is the advantage of one type over another?

D W McCluskey, Northumberland

stf: Neochrome pictures can be loaded and saved in low res and cannot be compressed. Degas pictures can be loaded and saved in all three resolutions either compressed or uncompressed. IMG files can be loaded in high resolution and pictures can be larger than the screen area.

TOS UP



What is TOS error 34 and why do I get it?

James Quinn, Co Tyrone

stf: TOS error #34 is Path Not Found. This usually means that GEM has tried to look in a folder that does not exist, gets confused and

coughs up the always-helpful TOS error #34 message to let you know what the problem is. It often happens because a disk has been changed and the directory information has not been updated within the machine. If you change disks with a drive window open while at the Desktop, then press the <Esc> key – this updates the directory.

PORT PROBLEMS



The joystick port on my STE doesn't work properly – sometimes I can't direct the joystick as I want to, but at other times it's OK. I have the same problem with all the joysticks I've tried.

Matthew Fyles, Cheshire

stf: The problem you have is very common and is simple to fix. The joystick and mouse sockets are not fixed in any way apart from the connections to the keyboard, so constant plugging and unplugging of the joystick and mouse gradually break these connections. Contact Ladbroke Computing International on + 0772 203166, who offer a quotation service for £15.

In future use a joystick extension lead (£4.70 from We Serve + 0705 325354) to prevent wear and tear on the mouse and joystick ports.



Assembly pointers

DISK SEARCHING

I am writing a slideshow demo, and would like it to search for all the picture files in a disk directory.

Michael Kirk, Stevenage

stf: You need to use a group of XBIOS commands that use an area of memory called the Disk Transfer Address or DTA. This listing shows you how:

```
* First you tell it where you want the DTA:
move.l    #Dta, -(sp)
move.w    #1A, -(sp)
trap #1    Fsetdta
addq.l    #6, sp
```

```
*Then you ask nicely for the first file
move.w    #%11111, -(sp)
! the %11111 means you are
! looking for all types of file
move.l    #path, -(sp)
move.w    #$4E, -(sp)
trap #1    Ffirst
addq.l    #8, sp
```

```
*Now you loop until you have
found all the files
loop      cmp.w    #0, d0
! This is 0 only if a file has been
found
bne       finished
move.l    #Dta, a2
btst.b    #4, 21(a2)
! This tells you if you have
! found a folder
bne next
move.w    #12, d7
move.l    #file, a3
add.l    #30, a2
! This is where the filename is
```

```
move      move.b    (a2)+, (a3)+
dbeq.w    d7, move
pad move.b    #0, (a3)+
dbra d7, pad
*Insert your routine to display the picture
*Its filename is stored in file below
next      move.w    #$4F, -(sp)
trap #1    Fsnxt
addq.l    #2, sp
bra loop
finished
data
path      dc.b      "A:\*.PI1", 0
! this looks for all PI1 files
bss
Dta ds.b 44
file      ds.b      14
```

This finds all the files with the PI1 filename extension (that is, low res Degas pictures) in the root directory of a disk. Change the pathname on the line that starts with "path" to look for other files. Once you are comfortable with this you might like to try asking it to look inside any folders it finds.

SCROLL ON

Two related questions. John Threlfall of Huddersfield would like to know how to produce scrolling text, if possible using Degas PI1 fonts. Tony Fearn from Norwich is finding it difficult to produce background scrolling that isn't slow or jerky, and wants to know how to produce gameworthy scrolling.

stf: Scrolling is such a vast subject that we could easily fill a whole magazine with it, so we can only touch on it here. You can use fonts stored in Degas

format for scrolling text. Supposing your letters are 32 x 32 pixels large. The listing below moves the first letter to the top left of the screen; a4 has the address of the screen, and the data from the Degas file is stored at image.

```
move.l    #image, a3
move.w    #32-1, d3
nextline
move.w    #4-1, d4
move_it   move.l    (a3)+, (a4)+
dbra d4, move_it
add.l    #160-16, a3
add.l    #160-16, a4
dbra d3, nextline
BSS
image     ds.w      16000
```

By adding values to a4, you can print your letter at different points on the screen. Adding values to a3 enables you to access different characters. You still need to "undraw" the letters before moving them, and the routine can only move characters 16 pixels at a time. Thanks to the inherent difficulties in scrolling, you'll find it easier to obtain polished results to begin with if you use GFA Basic; see the discussion on sprites in STF 35.

There are many tricks to producing fast background scrolling. The best advice is to study other programmers' listings; look out for PD demos that include the source code, but don't use anything without permission. Bullfrog, the team responsible for Populous, produced a series of articles that appeared in ST FORMAT from issue 22 onwards. These contain some very fast drawing operations that access the video shifter chip directly. Studying these should help speed up your routines.

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Exposed - the Mega STE

Do you know anything about the Mega STE? No? Well, this is your first chance to discover it from the inside out as Clive Parker gets out his circular saw and strips down the top-of-the-range ST

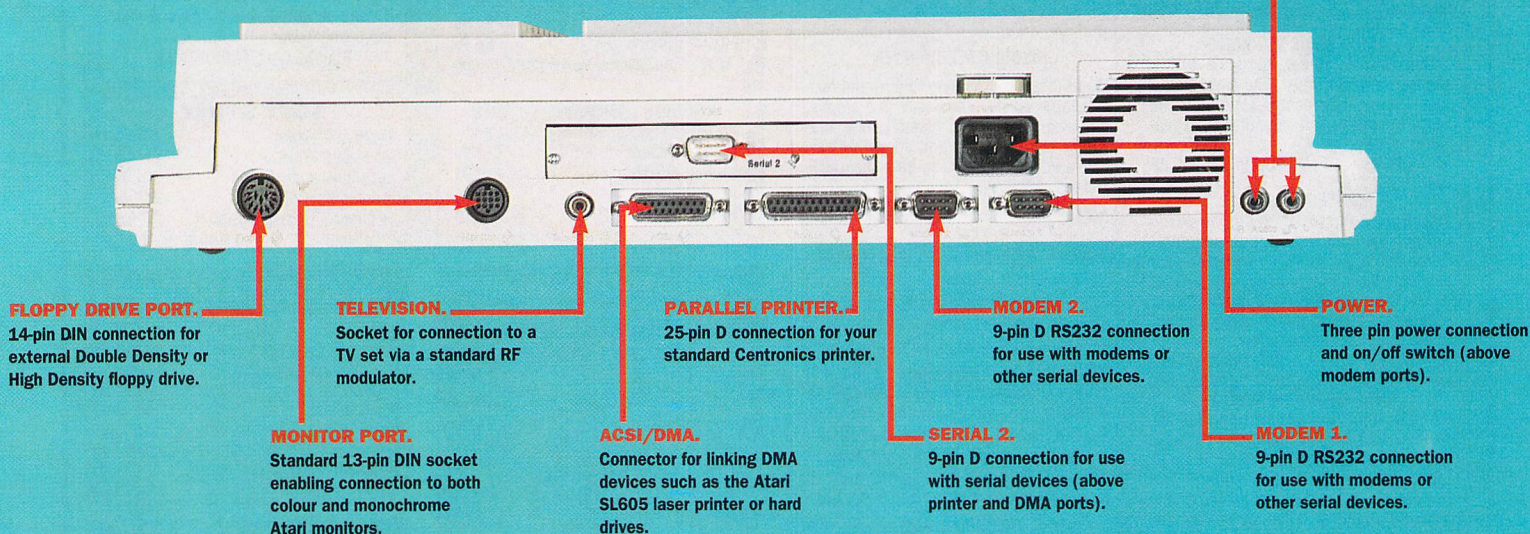
Lurking silently but proudly at the top of the Atari ST range is an unknown quantity – the Mega STE. This beast has been available in the UK since April 1991 but hasn't really been talked about by the computer press nor has it

been particularly supported by the software houses. As a result, unless you happen to own one of these machines, you probably don't know a great deal about them. The Mega STE combines the best features of the 1040 STE and the TT, the STE's mother-

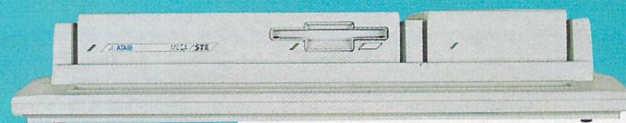
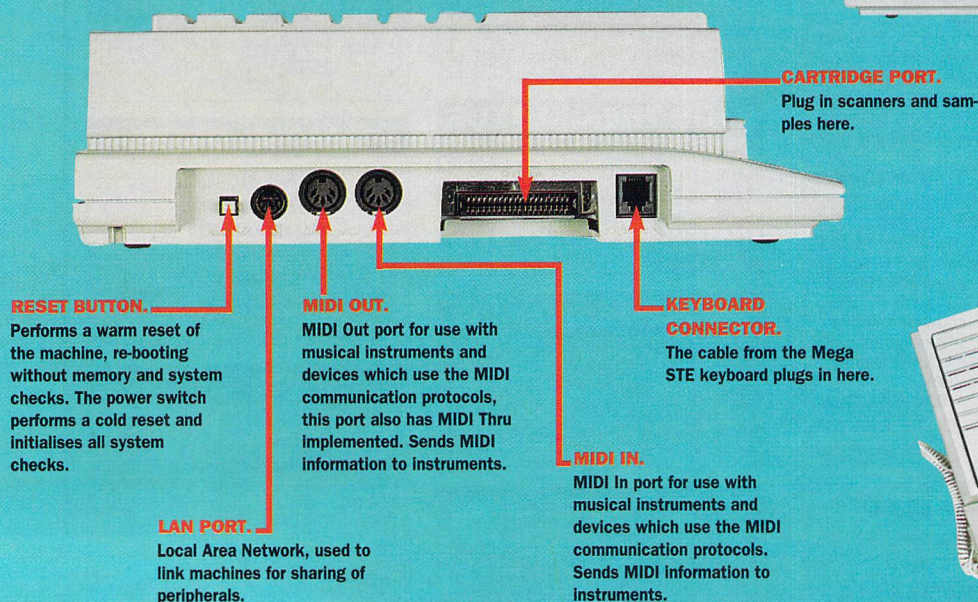
board having been rather cleverly redesigned and then rebuilt to fit into a TT style case. We bravely sent our technical man off to peep inside that case in a bid to give you the lowdown on the Mega STE's internal workings.

THE REAR PORTS

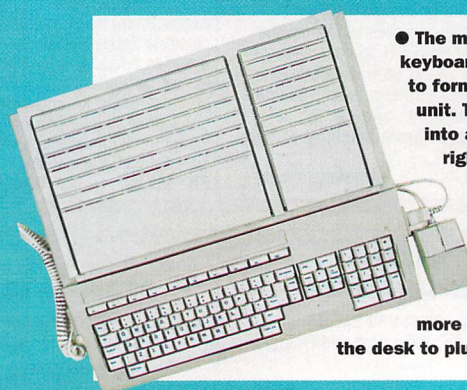
THE PORTS. The rear of the machine has a few more ports than the old STs. From left to right they are:



THE LEFT HAND SIDE PORTS



● The Mega STE's front view – it may be an unusual looking mother but it gets the job done.

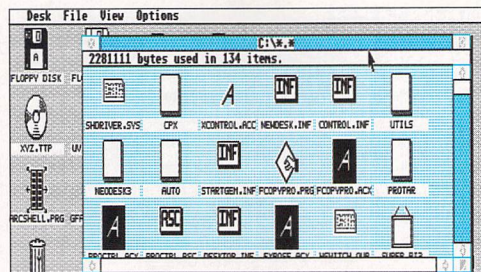


● The main unit and the keyboard clip together to form an impressive unit. The mouse plugs into a socket at the right of the keyboard and the joystick socket is in an identical position on the left – no more kneeling before the desk to plug in the mouse.

OPERATING SYSTEM FEATURES - TOS 2.06

When you turn the Mega STE on, you first get an eye-ful of the large Atari logo in the top left of the screen, this is followed after a few seconds by a view of a growing black bar. This is a RAM check – it verifies the amount of memory installed. A second bar appears after the memory test is complete acting as a two minute time-out before the machine boots the hard drive. It is actually designed for use with networks where the file server takes a while to poll all the machines on the network. You can bypass this time-out feature by pressing the Spacebar.

The new Desktop is a vast improvement over TOS 1.62, with a host of new features putting it on a par with NeoDesk. All menu commands can be assigned to keys and activated by a single keypress. All key assignments can be user-defined from a menu option and the information saved along with other data by using the normal Save Desktop option. The old DESKTOP.INF file is now called NEWDESK.INF,



● The improved Desktop of TOS 2.06 as you can find in the Mega STE. Individual icons can be designed in a resource construction set and then you can assign them to specific files or file types.

and several different Desktop layouts can be saved to the hard drive and loaded when required. Up to 20 programs and applications can be assigned to the function keys and launched directly from the Desktop. In addition, any program icon can be dragged

onto the Desktop and then launched by double-clicking on its icon.

The files with the operating system include DESKICON.RSC, which contains the data for the Desktop and window icons used by TOS 2.06. It is a GEM resource file which can be loaded into a resource construction kit and edited to your heart's content. New icons can be created from scratch or the existing icons edited – the only restriction being that the resource file must not exceed 64K in length. Individual icons can be assigned to programs and the data saved with the Save Desktop option.

EXTERNALLY YOURS - PORTS 'N' ALL

The main guts of the machine – floppy drive, power supply, VME slot and so on – are housed in the left two-thirds of the case. This part of the case also acts as a plinth for the new Atari SM144 and SC1435 monitors – they simply slot onto the top of the unit. The right side of the machine contains the hard drive

THE MOTHERBOARD

LAN PORT:

LAN (Local Area Network) is, in effect, a socket which enables machines to communicate so that peripherals like laser printers and hard drives can be shared. You need special network hardware and software to set up the system. Try the Universal Network package at £99.99 or Data-Net (£399.99) both from Ladbroke 0772 203166. The Data-Net system uses the Universal Network software and a cartridge designed by Ladbroke's which you can also use to link older STs and STEs to the new machines.

CACHE RAM:

This is a special section of additional memory used by the Mega STE when running in 16MHz mode. A cache can speed up disk and memory operations by storing frequently used information and commands for near instant access. The cache RAM on the Mega STE only works when the machine is running in 16MHz mode and can be switched on and off from the General Setup CPX in the Xcontrol Panel.

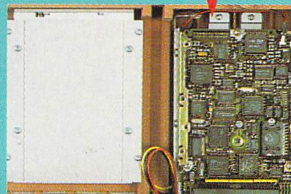
16MHZ 68000 PROCESSOR:

The 68000 processor at the heart of the Mega STE runs at twice the speed of the standard machine – a clock speed of 16MHz as opposed to 8MHz. This enables programs to run at twice their original speed, although some programs such as GFA Raytrace and Spectrum 512 have timing problems because of their special screen modes. The clock speed can be switched to 8MHz from the General Setup CXP to ensure compatibility with these programs.

1.44MBYTE

FLOPPY AS STANDARD:

All serious computers are now supplied with 1.44MByte HD (High Density) floppy drives as standard so more data can be contained on each disk. The Mega STE follows this trend although early Megs were supplied with standard 720K DD (Double Density) drives, and the instruction manual makes no mention of HD disks or their use. The Mega cannot tell the difference between a DD and an HD floppy disk, so a 720K disk gets formatted to 1.44MByte. This may seem like a good thing but DD disks formatted to HD standard are notoriously unreliable.



VME EXPANSION BUS:

The Mega STEs have been provided with an industry standard VME slot – industry standard except for the fact that it can only accept a half size VME card. The other problem is that there is still only one expansion slot – and, though it hurts to admit it, even the most basic PC compatible machine has a minimum of three expansion slots.

TOS 2.06:

Atari have produced an ST compatible version of the TT operating system, TOS 3.0, for the Mega STE machines called 2.06. This is a vast improvement over previous versions of the operating system, with user definable keyboard shortcuts for all menu items and definable icons for programs. You can place program icons on the Desktop as well as launch programs from there. The Desktop takes the best features from NeoDesk and combines them with its own to create a much friendlier environment.

HARD DRIVE AND INTERNAL SCSI INTERFACE BOARD:

A 47MByte SCSI hard drive is fitted as standard on the Mega STE enabling users to install and run large applications with ease as soon as the machine is booted. The external interface port for a hard drive is the standard Atari ACS1 19-pin D connector, so any ST specific hard drive can be added as a second unit. Internally there is a plug-in ACS1 to SCSI interface board mounted at the rear right side of the machine. This enables the internal SCSI drive to be removed and any size SCSI hard drive to be installed as a replacement.

● The Mega STE exposed for the whole world to see. The large square grey area at the left is the power supply shielding, directly below this you find the MIDI control chips, the 16MHz 68000 processor, the cache RAM and the empty co-processor socket. The central area shows the VME slot with its cover removed and the three custom chips which control much of the central housekeeping involved in running the machine. The right end of the machine contains the hard drive and floppy drive interface sockets, the SIMMs sockets with 2MBytes installed and the TOS 2.06 chips.

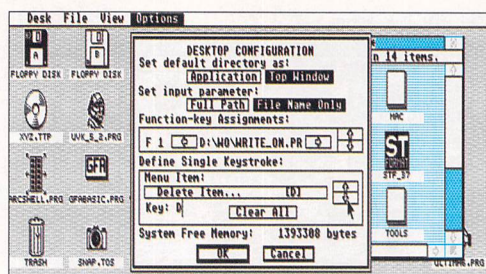
SIMMS MEMORY BANKS:

The Mega STE has the same memory capacity as the STE – that is, 4MBytes of RAM installed on standard SIMMs plug in memory boards. The big difference between the old STEs and the newer Megs is the ease with which SIMMs can be installed. On the STE the top of the machine has to be taken off and part of the shielding removed – doing this invalidates the warranty on a new machine. On the Mega STE just one screw has to be undone on the underside of the machine enabling the hard drive unit to be removed exposing the SIMMs slot beneath – any additional RAM can be simply plugged in.

with the SIMMs memory slots and TOS chips positioned directly beneath. The hard drive and memory is easily accessed by removing one screw in the underside of the machine, the lid holding the hard drive can then be lifted straight out and the drive unplugged. This is an excellent idea which could also have been used for the main housing, enabling access to the rest of the machine.

The Mega STE is larger physically than the older Mega range and is housed in the TT "wedding cake" style case with a separate keyboard, but in Atari ST grey rather than the TT's off white. The main unit is just over 19 inches (490mm) long, 11 inches (290mm) deep and 3.5 inches (90mm) high.

The MIDI ports remain on the left side of the machine, alongside the new LAN (Local Area Network) port and the reset button. The reset button is now within easy reach so you no longer have to grope around behind the machine to get out of a crash. The power switch is less accessible, being on the back of the machine and at the dead centre of



● Program icons can also be placed on the Desktop area and the application launched by double-clicking on the icon. Up to 20 programs can be assigned to the function keys, then opened by a keypress. All Desktop menu items can be assigned to keys.

the monitor plinth. This means you have to perform minor contortions to turn the machine on and off. The LAN port can be used to link machines together, using network software, so information and peripherals can be shared between a roomful of Mega STEs

and TTs. On the back of the Mega there is a standard 25-pin parallel printer port, two 9-pin PC-style RS232 modem ports, a standard ACSI/DMA port for hard drives and other DMA peripherals, an external floppy drive port, a 13-pin DIN monitor port and stereo phono sockets for audio output. There is also another 9-pin serial socket fixed on the plate which covers the VME expansion slot. This port can be used for serial devices like a light pen or graphics tablet. This port has to be removed if a VME card is installed.

The industry standard VME slot has been included so you can fit any standard plug-in memory expansion card. The VME on the Mega STE is only half size – a bit of a problem since this is very rarely used as the standard size VME slot. Any graphics cards designed for the old Mega ST 68000 expansion bus are therefore useless and have to be redesigned for the new machines.

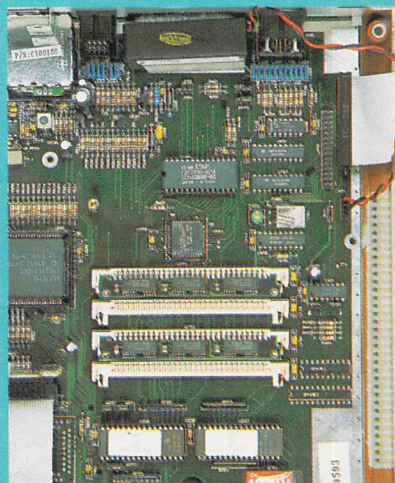
The keyboard is the TT model, with a much better feel and response than the older machines. Atari have finally dealt with the problems involved with the

INTERNAL AFFAIRS – UNDER THE BONNET

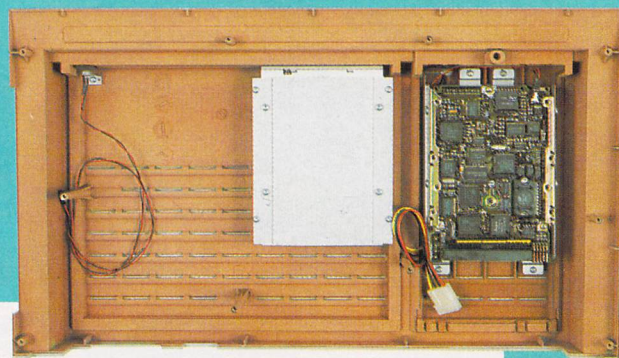
At last Atari have supplied an ST with a built-in hard drive. The basic unit supplied in both the 2MByte and 4MByte versions is a 47MByte SCSI drive. Drives with greater storage capacity are available from most suppliers. Because the hard drive is so easily accessible, it is a simple job to replace the original drive with a larger SCSI replacement. Atari have supplied their own ACSI to SCSI host adaptor as a plug-in unit on the main circuit board. Unfortunately the Mega 1 STE is not supplied with the SCSI host adaptor, but standard external DMA hard drives can be used in the normal fashion.

The floppy drives on all new Mega STEs are now High Density (HD) 1.44MByte drives – earlier machines were supplied with Double Density (DD) 720K units. HD disks may be formatted by the Format Floppy Disk option in the File menu – the only problem here is that the Mega STE cannot tell the difference between a DD and an HD disk and quite happily formats both to 1.44MBytes. This is probably caused by the new Ajax floppy drive controller chip not using the HD detect line correctly. In all other respects the drives work perfectly well, although there is no mention of the High Density capability in the manual.

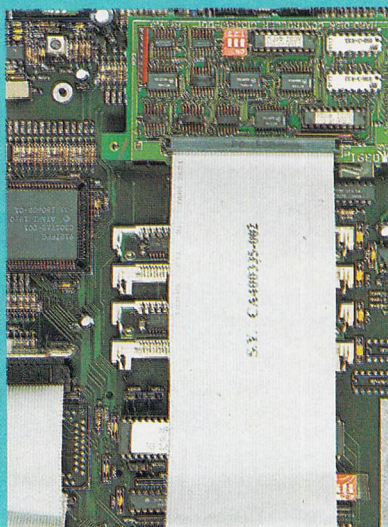
The memory is installed in standard SIMMs sockets in either 1MByte, 2MByte or 4MByte configurations. Extra memory can be easily added to the Mega STE by removing the hard drive unit, enabling the two smaller memory configurations to be expanded to 4MBytes. The TOS 2.06 ROMs are also under the hard drive unit and are socketed for easy replacement and upgrading to future versions of the operating system, such as MultiTOS. The main processor is a 68000 running at 16MHz either with or without memory caching and is switchable to 8MHz to maintain compatibility with older programs which can't run at 16MHz. There is also a socket on the main board for an optional 68881 co-processor that you can use with processor intensive software such as CAD or DTP programs.



● Detail of the right end of the machine normally covered by the hard drive. The ribbon connector at the top right is the floppy drive connector, immediately to the left of it is the socket that the SCSI host adaptor plugs into. The centre is dominated by the four SIMMs sockets, and below these are the two TOS chips containing the operating system.

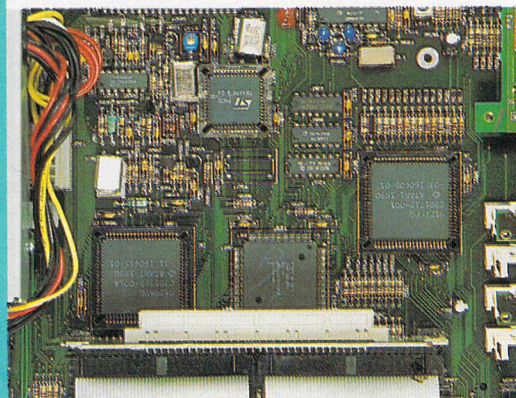


● The floppy and hard drives are both fixed to the underside of the lid of the Mega STE. You can remove the hard drive section of the lid separately.



● The hard drive's SCSI interface installed on the motherboard of the Mega STE. A standard 50-way ribbon cable is used to connect the interface to the SCSI drive.

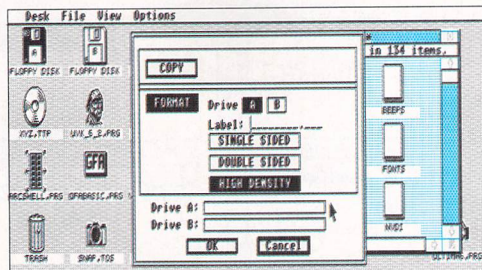
● Directly above the two ribbon cables is the VME connector seen here from above. The three large square chips are the custom chips which house the MMU, GLUE, Video Shifter and Blitter operations.



mouse and joystick connections – the mouse plugs in at the right end of the keyboard and the joystick at the left end. The only problem with the keyboard was that the connection to the main unit looks too close to the cartridge port – any large cartridges such as Spectre GCR or Stereo Replay may be a problem to plug in. The keyboard cable can be tucked underneath the edge of the machine out of the way but it can be annoying.

IS IT WORTH GETTING A MEGA STE?

The STE system still requires a TOS upgrade to 2.06 to match the specification of the Mega STE. If you already have an existing STE system, you could upgrade it to match the Mega STE specs rather than sell it and start again – SIMMs are becoming cheaper all the time and, if you're serious about your ST, you probably already have a hard drive. The only good reason for actually getting the Mega rather than upgrading is for the easy expansion route if you're



● The new Mega STE can format High Density floppies to 1.44MByte from the Desktop. Early Megas only had 720K drives and the manual does not refer to High Density drives at all.

going to need a graphics card. The basic 520 ST has been transformed almost beyond recognition into the Mega STE and prices have dropped considerably since the start of 1992. You can now get a 1MByte Mega STE from First Choice without hard drive for £539.99, a 2MByte machine with 47MByte hard

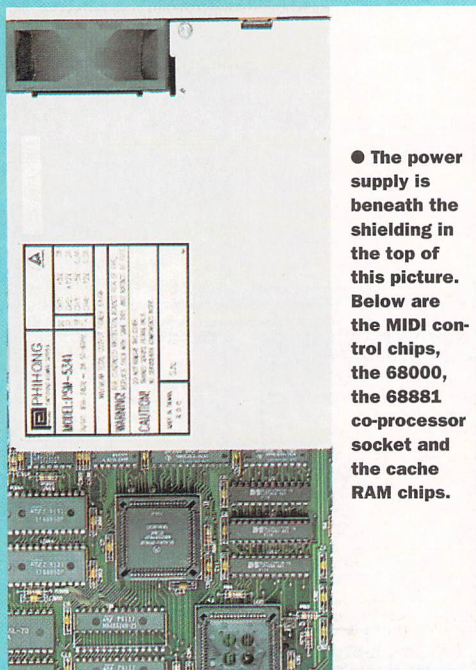
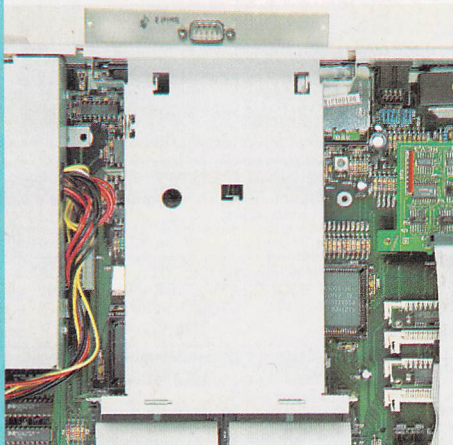
drive for £859.99 and a 4MByte machine for £919.99. Alternatively you could treat yourself to a 4MByte STE for £369.99 and a Progate 50 DC drive for £399.99 also from First Choice, and a 16MHz STE accelerator board for £165.00 from HCS – a total of around £935. First Choice are on ☎ 0532 637988 and HCS can be contacted on ☎ 081 777 0751 for more details.

The other thorn in the side of the Mega STE is the much talked about Falcon due to become available later this year. With its high specifications and low price point of about £550 it could wipe out the TT and Mega STE – see our report on page 50. As with all things Atari, it is a case of wait and see.

The Mega STE is a fine machine and works well, easily out-performing all the older STs. There are very few problems with software compatibility, and, if there is, the machine can easily be switched to 8MHz mode. If you want a high spec ST in a single compact unit, this is the machine to get.

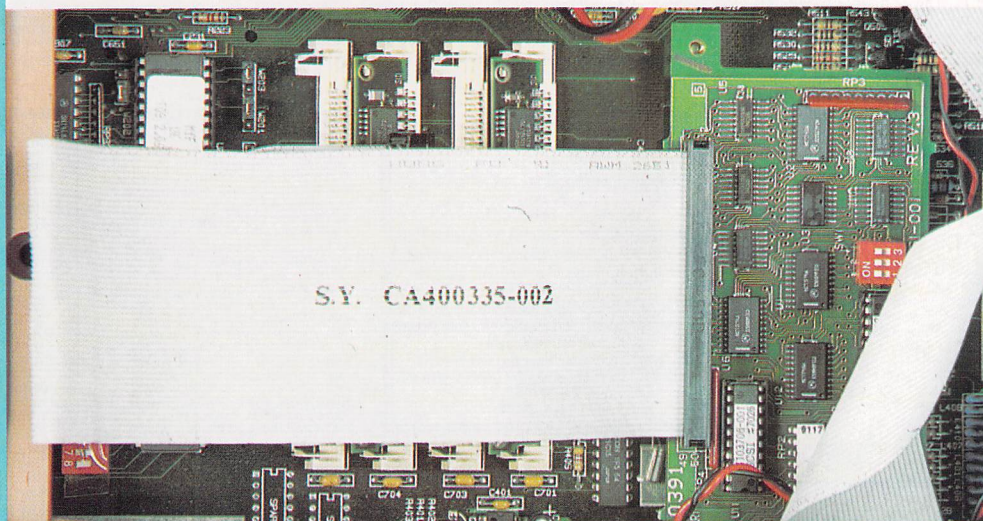
STF Rating: 85%

● The shielding that fits over the VME slot. At the top of the picture you can see the serial port which occupies the VME slot on the back of the machine.



● The power supply is beneath the shielding in the top of this picture. Below are the MIDI control chips, the 68000, the 68881 co-processor socket and the cache RAM chips.

● The hard drive removed to expose the easy access to the SCSI interface, the SIMMs and the TOS ROMs.



COMPARISON – WHICH ST IS FOR ME?

We compared the speed of the Mega STE system with that of a 520 STE and a 4MByte Mega ST. We also tested some software packages and applications to compare the speed of various functions. All the Mega STE timings are made at 16MHz with cache on and all tests were made in medium resolution.

ART PACKAGE: *Degas Elite*

This drawing program is normally quite speedy – the slowest function is rotating blocks. The Mega STE performed the task in almost half the time of the other two machines

The task: To rotate a 14K block image 90 degrees anti-clockwise using *Degas Elite*.

The results:

Mega STE	1 minute 20 seconds
520 STE	2 minutes 32 seconds
Mega 4 ST	2 minutes 32 seconds

CAD PACKAGE: *GFA Draft*

We used the famous Space Shuttle picture supplied with *GFA Draft* in issue 34 to compare the screen redraw times between the machines. The Mega STE was almost twice as fast at rescaling and redrawing.

The task: *GFA Draft* – Space shuttle redraw from 0.5 scale to 1.00 scale

The results:

Mega STE	2.8 seconds
520 STE	5.2 seconds
Mega 4 ST	5.1 seconds

WORD PROCESSOR: *Write On*

We used the second demo file from the *Write On* Cover Disk for the final test. We marked the entire file as a block and changed the text to the Pica 10cpi font. The Mega STE out-performed the other machines by over one third.

The task: To change the font of a 9K block of *Write On* text

The results:

Mega STE	45 seconds
520 STE	1 minute 10 seconds
Mega 4 ST	1 minute 32 seconds

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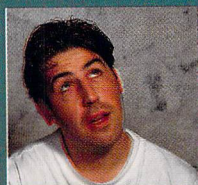
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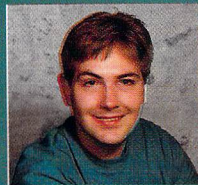


**ANDY HUTCHINSON**

Was once invited to speak at the Wheel Mangers and Prawn Shufflers' AGM in Torquay. He declined, explaining that, because of a clerical error there would, by that date, no longer be a Torquay because of M25 lane widening.

**ANDREW LOWE**

Considered a career with the RAC. However he gave the idea up when he discovered that it stood for Royal Automobile Association rather than Rather Attractive Clowns. He has since joined Chipperfield's circus.

**JAMES LEACH**

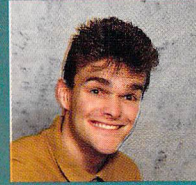
Once compared himself to a summer's day and came off very badly indeed. His hobbies include yoghurt manufacture, shoelace chewing, vine weaving and contemplating his navel. James is 22.

**JON PILLAR**

Knows for a fact that the universe ends. He discovered it round the back of Tesco's in Stevenage last Tuesday after investigating a strange glimmering light near a manhole cover. The incident slightly unsettled him and he now shops at Sainsbury's.

**LINDA BARKER**

Luncha Binker – as she prefers to be known these days – has sailed around the Serpentine single-handed, unicycled up Solsbury Hill and even survived a stampede of day-glo-rucksack-wearing Spanish schoolchildren. However, she won't talk about the latter incident.

**RICHARD LONGHURST**

Is known throughout the parish for his accomplished waving. His favourite manoeuvre is the demi-flick with half-twist and clockwise pike, although his V-sign has become a traditional encore number.

**RICH PELLEY**

What a man, what a lover, what a quiff. Young Rich has just joined the Southall and District Repertory Company. He plans to study all the great playwrights from Douglas Adams to Jackie Collins, while holding down a job on the fish stand at the indoor market.

SCREENPLAY

FIND OUT THE SECRET OF MONKEY ISLAND • COMPLETE SOLUTION TO GOBLIINS • MICROPROSE SOCCER • TOP GAMES CHEATS – PAGE 88

In ancient times the introduction as we now know it didn't exist. There was just a bit of grunting followed by a clash of skulls and then Anadin Extra all round. Makes you feel almost nostalgic...

**FIRE AND ICE**

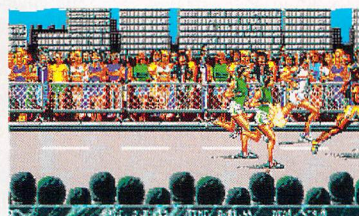
In which Cool Coyote becomes an unwitting pawn in an extra-terrestrial battle played out on an alien landscape – the prize for the winner is mankind's soul. That and a rather fetching leaping badger onyx ash tray from Rhyl.

PAGE 74

**HOOK**

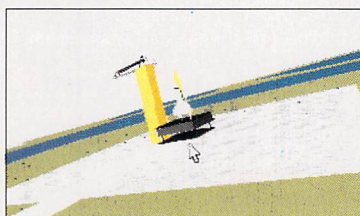
Humphrey House travels to the faraway world of Couldbeland to save his stamp collection from a smelly, one legged tax collector called Rook. At least, that's what they wanted to film – they managed to tone things down a little bit for the cinematic release. Not much mind. Erm, this is the game of the film.

PAGE 85

**INTERNATIONAL SPORTS CHALLENGE**

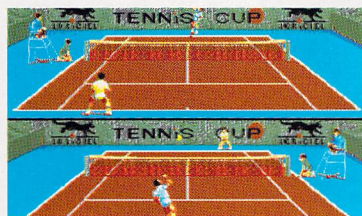
The challenging bit being that it's completely impossible to play every single event in the box within less than a fortnight. Reminds me of school sports day. Ah, the egg and spoon race, the sack race... the utter humiliation... sob.

PAGE 86

**SPACE SHUTTLE**

Taking emulation to new and (ahem) dizzying heights, this is Virgin's latest game. The idea is to take off, orbit a few times and then land successfully. All of which is completely beyond NASA. Perhaps they should invest in an ST and practise.

PAGE 83

**SPORT'S BEST**

See if you can guess the link between these three sports: car racing, kick boxing and tennis. Give up? It might be something to do with McEnroe's exploits on and off court. Only Loricel really know, though, and they're not talking. This one's going to run and run.

PAGE 77

**ULTIMA 6**

More caving and peasant slashing from that cuddly American software house, Origin. In this latest sack and wattle wearing episode, your team of adventurers has to kick in a false prophet's head, at the same time avoiding using the word "cranberry."

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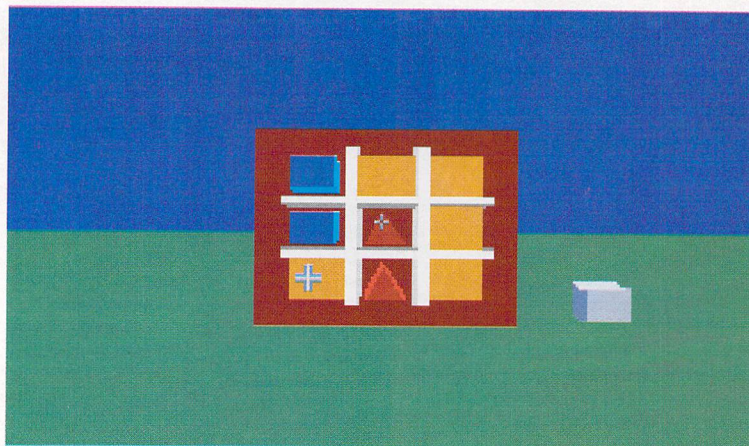
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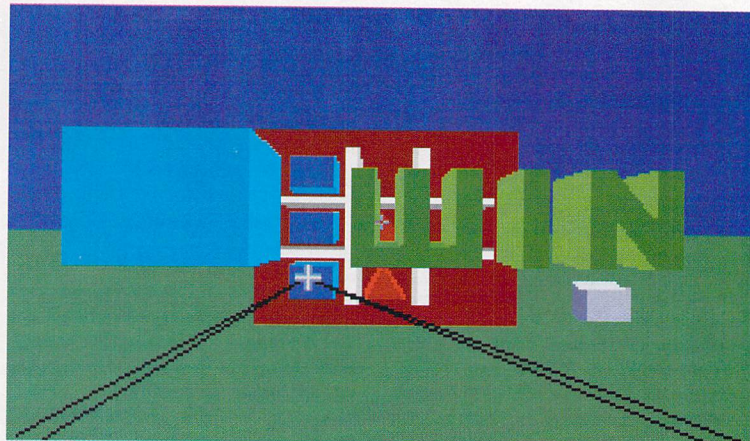
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THE ST FORMAT REVIEW POLICY

- It is ST FORMAT policy to review only finished games – that is, the games you could actually buy in the shops – never incomplete or demo versions.
- We review all games released but only when they are finished. We won't be rushed into reviewing unfinished games to beat our "competitors."



● A dramatic development in computer application software enables you to play *Noughts And Crosses* in texture-mapped 3D with triangles and squares instead of noughts and crosses. *3D Construction Kit 2* – the significant reduced to the trivial!



● Here we see the word "win" being zapped with a crosshair laser while a triangles and squares game floats irrationally in the background. What would Albert Camus have made of it, apart from believing this to be a crappy shoot-'em-up, that is.

PREVIEWS

PLAYING GOD

One of the most innovative packages ever released on the ST has been updated. *3D Construction Kit* from Domark received a huge 95% when originally reviewed in *STF* 27, so we're all waiting with baited dodecahedrons for *3D Construction Kit 2*.

The idea behind the program is that you can create your own 3D worlds. These virtual realities can have objects scattered about them which you can pick up and use elsewhere. Although its main applications are in the gaming and educational arenas, there's no reason at all why a business couldn't use the program. For example, an architect could create a house on the ST for prospective clients and then give them a guided tour of their building before it even left the drawing board.

There are some impressive new features being lined up for *3D Construction Kit 2*:

● **Clip Art disk.** This contains hundreds of objects for you to place within your 3D worlds.

● **Sound Effects Editor.** Once you've created your world, you can supply objects with their own sound so, for instance, a door could creak or a lock clunk.

● **Video Recorder Functions.** This enables you to record and play back your worlds with an optional slow motion function. Thus, if you created a street with houses on it, you could record someone walking down the street visiting each one.

● **Hard Copy.** You can now print out your funky designs.

Domark also promise that the program will include double the number of

control commands. These are to include new parameter types, new commands, structured programming, object manipulation and screen handling. These are designed to make the kit far easier to use.

An interesting new feature, included by the programming team, is the spherical object function – a good move because, in the original program, the

What do rave culture, kayaks, virtual reality and Graham Taylor have in common? Andy Hutchinson and Andy Lowe check out some exciting new developments on the games front

worlds were dominated by straight lines. There is also provision for flexi-cubes – objects which can stretch and change. Look out for the Cover Disk demo coming soon to *ST FORMAT*.

TOTALLY BITCHIN' DUDE

Given the effects of the hole in the ozone layer on this fair isle, you might

be forgiven for thinking that we lived in the Tropics. Despite this, the British summer is still best known for its erratic weather and, when the heavens open, it's good to know you can nip inside, power up your ST and sample a bit of sun, California-style.

California Games 2 from US Gold is to be released just four years after the original roller skated onto the shelves

THEY THINK IT'S ALL OVER... IT IS NOW!

We investigate the latest offering from Sensible Software – *Sensible Soccer: European Champions*

The latest and greatest in computer footy hits the ST this month and we've managed to secure you an exclusive rather tasty playable demo. It's on this month's Cover Disk and you should, by now, have sampled it – and if not, why not?

Aside from lightning action to rival most shoot-'em-ups, *Sensible Soccer: European Champions* comes with an incredibly extensive array of features you can customise, including 100 European teams (International and Club), fully definable leagues and cup tournaments; one

and two player options (of course!), accurate and detailed kits, "Intelligent" passing, skills your players actually learn, replays and match highlights, sampled crowd sounds, European Champions competition, diving headers, sliding tackles and named scorers.

And, as if all that isn't enough, there's a substitute's bench from where you can pick your replacements should your team formation begin to look pedestrian in the face of such ravers as Atletico Madrid or PSV Eindhoven. You can also

create your own team of favourite heroes (or heroines) who need not have anything to do with football. For example, you can include the Mass Murderers featuring King Herod in goal, Dull Things offering the talents of Receipt, Mat and Lid and the Ancient Gods with their star centre-forward and major goal-scorer, Dionysus. So, if you enjoy the game but aren't a major football bore, this is the option for you! All in all, it looks as if *Sensible Soccer's* got terrific depth and masses of playability. Watch out for the full review next month.



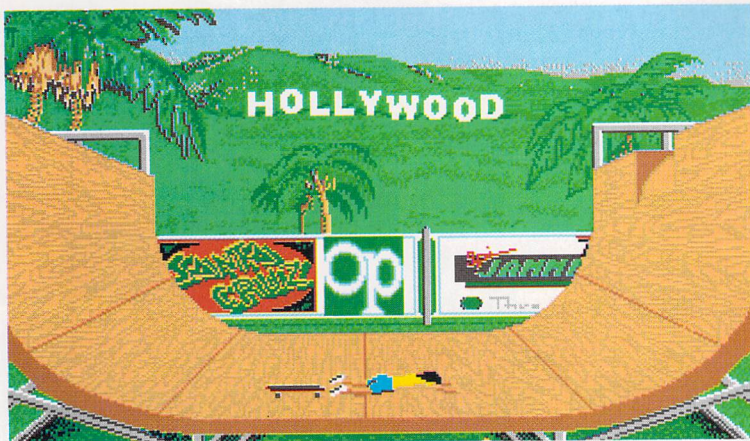
● The feeling you get at seeing your team do rather well – psychologists call it Soccer Euphoria Syndrome. Others prefer Bonkers Footy Mania.



● The England squad. The program enables you to redesign the entire team. You can even throw in Mr Benn or someone as the manager.



● The Computer Mags vs the B-Movie Monsters. An aggressive approach based upon an attacking formation seems to work best here...



● Like utter bummer, man. *California Games 2* enables you to zip up and down the sides of a half pipe and then crash in embarrassment, having tried to pull off a difficult stunt after two practice runs. Virtual sticky plasters are extra.

of your local – but probably extinct now, thanks Maggie – software emporium. It was, however, a great compilation and so you can expect great things from the sequel. There are five radical new events including:

● In the hang gliding section you can leap off San Francisco's Fort Funston and zip out over the Pacific Ocean. The big idea here is to take off (tough one, that), stay aloft (tougher still), perform stunts (surefire death), hit some targets and land at the launch point, all within the rather demanding time limit of two minutes. Yes.

● If snowboarding doesn't strike you as being massively reminiscent of California, then you're in for an enormous surprise. With this one you get to pull some extremely funky stunts on your

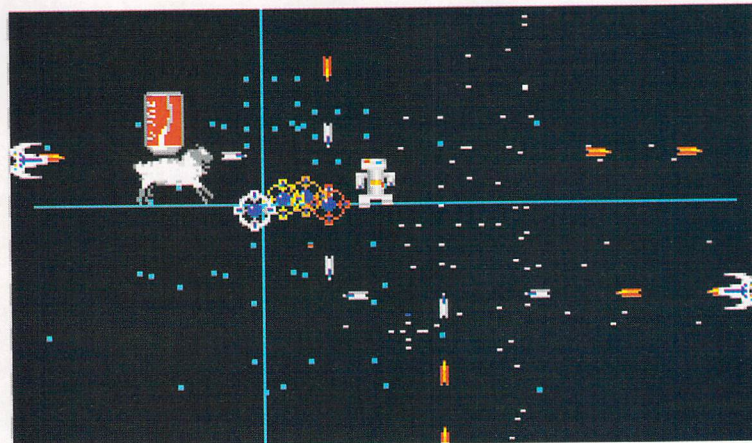
snowboard over either the Black Diamond or obstacle courses.

● The jet surfing event sounds very West Coast. The rather novel idea here is to zoom around a course as fast as possible while staying on the board.

● Bodyboarding is excellent fun. You lie down on a small boogie-board and perform the kind of stunts that are impossible on a real surfboard. 360 degree turns and inverted flips are two real favourites.

● The compilation wouldn't be complete without a bit of traditional skateboarding. The idea in this event is to head into the aquaduct before the water police get you.

Hang on... Doesn't it remind you of that scene from *Terminator 2* where the T1000 is chasing Arnie and



● *Hardcore*, you know the score. Minter's back with one of his hardest, meanest, weirdest zappers yet. You fire a puck around the screen destroying the usual array of endangered species and soda cans. And get in touch with your karma, of course.

sprogette in a truck? No? So there weren't any skateboarders in it, but the principle's the same, surely?

SPORTING CHANCE

More sporting compilation-type antics are in the *Mega Sports* compilation, again from US Gold. There are 33 events crammed onto the disks, so the immediate thought that springs to the minds of everyone on *ST FORMAT* is that the individual events aren't going to be much cop. We are, however, prepared to be surprised.

Those events in full are: archery, aerial skiing, BMX racing, biathlon, bobsledding, cycling, diving, fencing, disk flying, footbag, free skating, free style swimming relay, 100m freestyle swimming, gymnastics, half-pipe skateboarding, hammer throwing, high jumping, horse riding, hurdling, javelin throwing, kayaking, pole vaulting, rings, roller skating, rowing, skeet shooting, ski jumping, triple jumping, parallel bars, velodrome cycling, 100m dash, 4 x 400m relay, Jaffa Cake mashing, hedgehog resuscitating and National Health dentist searching. The last three may be lies, though.



● Unfortunately, you can't do an eskimo roll, no matter how hard you wiggle the joystick in *Mega Sports*.

HE SHOOTS, HE SACKS GRAHAM TAYLOR!

Yawn, yawn, yawn. If the European championships firmly beat any interest in football out of your cranium, you are sure to greet a new footy game from Domark with considerable apathy.

This one's aimed at the great Euro-footy bash and is called *European Foot-*

ball Champ. You can play either one player, two player competitive or two player cooperative matches with control over either France, Germany, Scotland, Italy, CIS, England, Holland, Switzerland and Spain. So if you feel you can do better than Graham Taylor – and, let's face it, plankton could – then choose England.

The best fun seems to be had from the two player cooperative game in which you and a mate can pit yourselves against another team and hoof the ball between you.

All the usual footy stuff's in here: throw-ins, goal kicks, trick shots – scoring a goal in England's case – diving headers, back heels, bicycle kicks, penalties, free kicks, gobbing, snogging and dramatic falls (Italy only).

HARDCORE, YOU KNOW THE SCORE

Good news, blast'em-to-bits fans, Jeff Minter's newest game is nearing destruction, erm, completion. The game's called *Hardcore* and a five level demo is currently doing the rounds with an invitation from the great bearded one himself to give him some feedback about the game.

Your initial reaction is likely to one of cerebral cortex melting glee. You control not one, but four battle stations placed on each edge of the screen, creating a bloody great wall of fire. However, if you think that nothing could survive in there for more than a few seconds, you'd be mistaken indeed.

The theme of the game is most definitely rave culture. Jeff's been busy with his sampler – he's nicked some choice sounds from *Bill and Ted* as well as a selection of rave tracks. In fact, if you start doing particularly well, the game suddenly breaks into rave mode and treats you to a psychedelic sonic and visual meltdown.

Utter hardcore zapping fans are going to like the game lots. Beekeepers should stick to *Populous*. The *ST FORMAT* advanced-preview type rating is eye meltingly radical. **stf**



● Godzilla hammers one home for the Monsters as Crash and The One look on helplessly. Quick, somebody, throw some toilet roll onto the pitch.



● Voller storms through England's defence, thoughts of 1966 on his mind... Oh, and he's missed! Well, anything's possible in *Sensible Soccer*.



● Now this is dangerous! 0-0 and a German corner in the 88th minute. Can England weather the storm or, er, bite the bullet? Oh, I just don't know.



● Here's a totally unconnected shot of a bunch of grown men kicking a bag of wind around a field. Don't let them do it to you, Graham!

AIR BUCKS

Fancy yourself as something of an amateur Freddie Laker? No? Impressions seem to think there's some interest to be extracted from the turgid and involved world of the airline business, hence *Air Bucks*. It's 1946. You're 25



● Keeping the in-flight meals palatable should be your prime consideration if you want to save money on sick bags.

years old and you've just founded your own airline company, Airbuck\$ - named after the moths that used to fly out of your dad's wallet. You have \$100,000

and a rather small Dakota DC3. You must build up your airline by acquiring landing rights to carefully selected international airports, buy some planes, construct a global network of air routes and casually overcome all manner of lurking business pitfalls until, 40 years later, you're ready to retire a happy and financially bloated air-tycoon.

When you buy new planes you have to decide which models suit a particular international route, how much you're going to charge for a ticket and how much of the plane's capacity is to be taken up with cargo - a potentially lucrative market. Eventually you develop a large fleet of planes, all flying the best routes more profitably than your four competitors - you can play against your ST, other players or a combination of both.

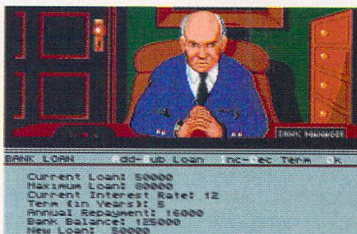
VERDICT: By now you should have a fair idea of what to expect from an Impressions game like *Fighter Command* or *Warriors of Releyn* and *Air Bucks* is no different. The game is a

surprisingly absorbing attempt at simulating a previously neglected area and, with a bit of commitment, could be reasonably entertaining.

Unfortunately you do feel like you're getting nowhere slowly, which can be extremely trying if you're used to diving into a game without reading a novel-length manual.

If you like your gaming to be easy on the jumping and blasting, but heavy on its complexity and realism, you are sure to enjoy *Air Bucks* a great deal.

ANDY LOWE



● Faced with a glowering and cynical bank manager, you attempt to bring him round to the somewhat delicate situation of giving you some money.

AIR BUCKS

IMPRESSIONS £24.99

● An elaborate and demanding strategy-simulation, which, given time, can be unusually engrossing.

STF RATING 65 %



● The orange skyscrapers represent medium sized cities, while the low-level buildings are smaller towns. Which ones you attempt to negotiate the landing rights for is up to you. Be sure to avoid the Bermuda Triangle, though.

POPEYE 2



You'd think, what with Popeye being 63 this year, he'd be far too old to be trotting around avoiding falling masonry, rotten rope bridges, bombs and fireballs. Surely he should be sitting at home with his pipe and slippers, reading *The Daily Barnacle* or something? Yeah, but you reckoned without the sailor-man's hunger for excitement and his strangely pathological addiction to spinach. You've also forgotten the fact

that bruiser-boy Brutus has swiped Olive again and, of course, it's down to poor old Popeye to do the decent thing and swipe her back.

All of the usual characters are hanging around, ready either to help or hinder Popeye's progress. Wimpy, he of the high cholesterol, can be placated with a hamburger or six. Sweet Pea is an overall pain in the hindquarters, crawling cutely, but precariously, around the edges of the platforms and girders. Then there's Brutus, who won't hesitate to keep hold of his spindly detainee, Olive, by fighting dirty with a huge wooden club. Meanwhile, Popeye jumps around

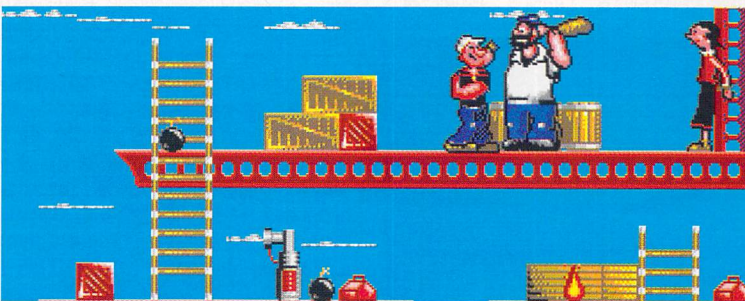
the different scenes defusing bombs, collecting spinach for strength and hamburgers for Wimpy, while avoiding the various falling, rolling and disintegrating hazards. Sound familiar? At least it's a good excuse to sing *Popeye The Sailor Man*.

VERDICT: *Popeye 2* is a capably presented but otherwise simplistic game which makes no attempt to transcend the limitations of its well-thumbed genre. It contains one or two irritating random elements and has nothing original or eye-catching to keep you returning for more.

ANDY LOWE



● "Take that and that!" One of the goons fancies himself as a potential Popeye-pummeller. Once he's been disposed of, you have to get past a reckless coconut-throwing monkey.



● Olive looks on as Popeye gets battered by Brutus - this can lead to a huge hole in Popeye's ego as well as his head. Incidentally, Brutus is on a Slim-Kwik diet.

POPEYE 2

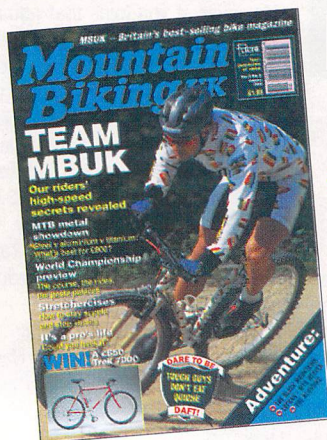
ALTERNATIVE £7.99

● Dull and repetitive platform game, with only a minor level of playability.

STF RATING 63 %



● Near the end of the final level, Sweet Pea threatens to throw himself over the edge and you know that the rigging alone won't save him. Eat that spinach!



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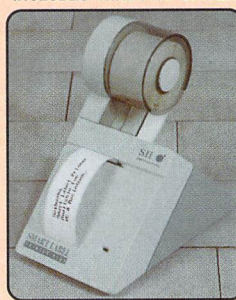
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FIRE AND ICE

Cool Coyote is, indeed, cool. Cooler in comparison to dungaree-wearing plumbers or blue-rinse hedgehogs but, as Andy Hutchinson discovers, not really up there with Prince



This is the ST gaming world's answer to those insidious lumps of mindless plastic known as "consoles" which are corrupting the software scene to such a great extent. Renegade is pitting *Fire and Ice* against the *Marios* and *Sonics* of this world and may eventually put the game onto a console in a fiendish world domination bid. *Fire and Ice* is a platform

● This isn't where Cool Coyote lives, it's a tourist igloo. For \$15 you can even stand in front of a fake frozen waterfall or buy a T-Shirt saying "My parents went all the way to the Arctic and all I got was this lousy T-Shirt."

game written by Andrew Braybrook, a veteran of the home computer scene. Mr Braybrook – as his bank manager calls him – has produced such classic games as *Paradroid* in the past and so has a lot to live up to.

The main character and future global icon in *Fire and Ice* is a chap called Cool Coyote. Mind you, "Cool" may be overdoing it a bit – when you see him on-screen, padding about in a pair of Oakley shades, you're left in little doubt that this is a serious fashion-victim. In fact, he probably only goes down to his local igloo on a Saturday night to tell all the chicks... erm, penguins how great he is and to pose languidly at the bar. Perhaps Renegade should have plumbed for something like



● There are some particularly vicious creatures in *Fire and Ice*. However, the programmer failed to include them and instead used penguins and seagulls. This leads to the player chanting "Kill the penguins, kill the penguins."

Clarence Coyote, or possibly Clifford Coyote instead. But enough about him, what about the plot?

JAMES DEAN, ROBERT DE NIRO

Well, a jolly nasty magical beast, called Suten, is hiding on earth. He's escaped from prison where he was incarcerated for totalling a solar system. Obviously the inter-galactic authorities would like Suten to help them with their inquiries, so they've sent out someone to look for him. That person is Glemm.

Now Glemm has a big problem – he can't materialise on earth himself or Suten may detect him. The solution is to recruit an earth creature to do all the dirty work and then help the creature in

subtle ways. Glemm picks on Cool Coyote, inhabitant of the North Pole and golf partner to Father Christmas.

Unfortunately for Cool Coyote, the evil Suten's black magic has started affecting earth's creatures. So, the general credo is to shoot every critter in sight whether it looks cute or not. Not only do Cool's animal adversaries vary from land to land, they also get nastier as the places get hotter.

The landscape also creates problems, with chasms and jumps all conspiring to stop you reaching the end of a land. To complete a level you need to collect the six parts of a key by zapping creatures and then jumping through a handy temporal space-portal-cum-potting-shed door. It's not all bad news,

BABY, IT'S COLD OUTSIDE



● To get between levels, a set of ice-steps are useful. They do, however, have the unfortunate habit of melting when you're halfway down them. This is not cool.



● Look at the ickle, wickle, cute mouse. Yes, until he stabs you with his spear, that is. Sales of rodents are going to plummet when this game hits the shops.



● OK, now who's got my trousers? Come on guys it was funny for five minutes, but I'm going to miss my plane. Guys... guys... gyyyyyyys!



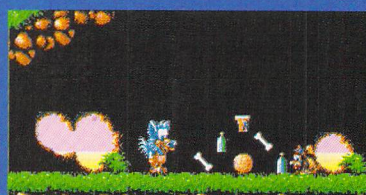
● See a penny, pick it up and all day long you shall have, erm, a penny. Coinage counts towards your final score and – according to mothers everywhere – ruins trouser pockets.



● These spiky balls kill you. Well, not you exactly, but the computerised on-screen representation of Cool Coyote which is controlled by you. OK, so it doesn't kill him either – it just hurts.



● Hint: in a Braybrook game, trust nothing and nobody. If Sooty appeared in this game he'd be an axe-wielding murderer – "Izzy-wizzy, let's get busy" would take on a whole new meaning.



● Obvious caption jokes – pick your own: (a) I've got a bone to pick with you. (b) Where's your bottle, Cool Coyote? (c) Now where did I put the dog? (d) Existentialism sucks. Discuss.



● The arctic circle is well known for its awful conditions. Avalanches and foreign-style bogs are common place and cause all sorts of problems to travellers. This doesn't bother the eskimos who carry skis and Porta-Loos for such eventualities.

though. Cool does have weapons within his armoury and these can be souped up thanks to power-ups left dotted around the landscape by Glemm. The basic weapon is an ice pellet gun. This freezes the enemy for a few seconds during which time they can be shattered. Power-ups include three way shots and large pellets.

No game would be complete without a smart bomb of some sort and Cool Coyote's version is made of snow. Snow bombs can be collected by firing ice pellets into the clouds.

When you release a snow bomb it freezes everything that's on-screen at that moment. You can carry seven of these at once, so they're a good backup weapon.

BEATRICE DALLE, VANESSA PARADIS

On his journeys around the earth Cool Coyote meets some friendly puppies which are immune to Suten's evil. Go near them and they follow you around. The puppies are equipped with ice pellet guns and fire when you do. They also yield an extra life when taken through an end-of-level door.

Although the game can be played straight through in a linear fashion, it's also possible to leapfrog worlds by finding handy secret exits. These are hidden in peculiar places and are generally discovered completely by accident. Unless, of course, your name is Andrew Braybrook in which case you should be programming the sequel. The difficulty

of each level has been well weighted – there's no way you're going to be able to complete this game in an evening. Even the first level presents you with difficulties and it doesn't get any easier as you progress. Fortunately there's a trainer mode in which you can experience the other worlds without having to plough your way through to them all.

One great feature is that you can play the game from the keyboard. In the "old" days there always used to be a keyboard option but, with the glorious advent of the joystick, programmers forgot that precise movement was possible from a humble QWERTY. So cast off your joystick and check out keyboard movement, it's much more responsive.

ANIMALS OFTEN MISTAKEN FOR COYOTES



1. THE COYPU. People tend to read the first three letters and say "Ah!" that's a coyote, when it is, in fact, a cavy-like rodent with a broad blunt muzzle which inhabits wetlands and comes from the family Myocastoridae.

2. THE DOG. People who had far too much fun in the '60s, and were overly fond of small mushrooms, are known to mistake common or garden dogs for coyotes. This is because of their massive paranoia and also their immense stupidity.

3. FOXES. The British hunting fraternity in their search for increasingly sophisticated excuses for their senseless destruction of British foxes often claim they are hunting coyote. This does not fool the hunt saboteurs who put it down to in-breeding amongst the richer members of society.

4. DUCKS. Amoeba owners often mistake ducks for coyotes, despite the fact that nobody has ever been savaged to death by a duck. There is no known cure for these sadooes and they are best avoided.

VERDICT: Welcome to the wonderful world of platform games. There are so many good touches in *Fire and Ice* that it's difficult to know where to begin. Braybrook has spent a lot of time tweaking the game and has created a platformer to rival *Rainbow Islands* or *Magic Pockets* in the process.

Graphically the game is stupendous. The background graphics and platforms are colourful and attractive, while the sprites are wonderfully animated. Full marks must go to Cool Coyote for the comic strip way he pads about the screen and nearly topples off the platforms.

Edge detection is, again, brilliant. There's none of this ridiculous balancing-on-platforms-by-the-toes business. If you go too near the edge of a platform you fall off – the same goes for jumping onto it. It's an unforgiving system which requires practice.

The dynamics of each world work really well. Learning to skip about on ice is a lot of fun. You have to think twice before running around a level because you can't come to an immediate juddering standstill every time you're faced with a bit of "local difficulty" – like you can on normal platform games – you just keep sliding.

What we have here is a program fully deserving a place in the collection of any ST owner. *Fire and Ice* is to the ST what *Sonic* is to Sega. However, unlike Sega, you get a decent hero in a gripping adventure with some brilliantly addictive gameplay and a long, long shelf-life. Welcome back, Mr Braybrook, and "Yo!" Cool Coyote.

ANDY HUTCHINSON



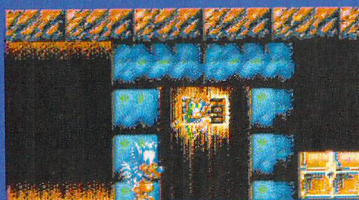
● Walruses are not to be trusted. They never pay their TV licence fee, take too long for lunch and they eat bourbons by biting the top bit off and then licking the cream out.



● Not so much a stairway to heaven as an iceway to the next level. Go through the door and suddenly you think you've left the cooker on. Don't worry, this is a normal reaction.



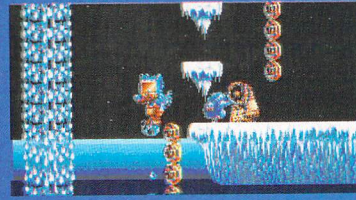
● Cool Coyote chooses a particular frantic moment to "moon" a passing seagull and skier. He is currently helping police with their enquiries into the Bermuda Triangle and Slough.



● Cool Coyote chances upon a chest. What could be in it? Gold? Jewels? Readers' Digest Prize Draw numbers? McNuggets? Smaller chests? Vanessa Paradis, perhaps?



● No such luck, it's full of 100s – 20 of them to be precise. What use are they? Now if Vanessa Paradis had been in there... (caption aborted as author has gone to lie down for a bit).



● Woah! Like excellent, dude! Check out the Oakley shades. Yo! Eskimo dude, have you seen a set of coyote sized high tops and some Wayfarer 2s? Dedicated to Wayne and Garth, 1992.

FIRE AND ICE

RENEGADE £24.99

● Sizzling gameplay, cute graphics, addictive action, oh and a sharp main character who's naked bar a pair of Oakley shades. Radical.

STF RATING 94 %



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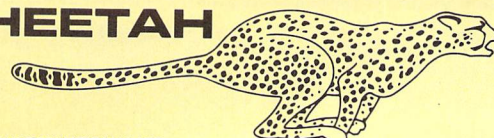
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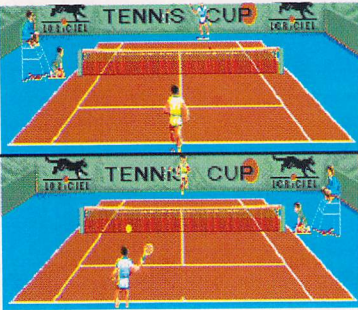
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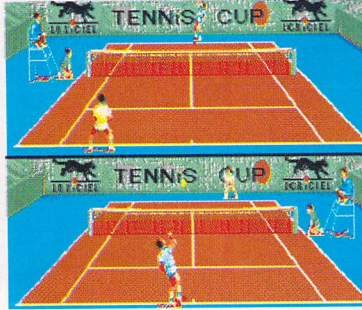


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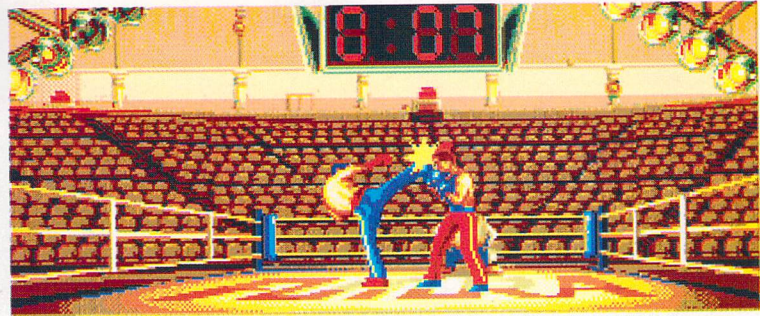
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● No matter how hard Batesy tries, he just can't get the ball over the net.



● A potential stormer from the Croatian Cyclone, er, Ivan Ivanisnothingy...



● After a hard day, there's nothing more rewarding than watching a harmless bit of brain-pureeing. Round One of the distinctly honourable sport of kick boxing.

SPORT'S BEST

Having fetched those trusty – or should that be crusty? – shorts from behind the back of the wardrobe, it's time to get down and do that funky fitness groove. *Sport's Best* comprises three games – *Tennis Cup*, *Turbo Cup* and *Panza Kick Boxing*. Now *Panda Kick Boxing* sounds much more fun...

TENNIS CUP

The most blatantly original thing that *Tennis Cup* has over its peers is its as-seen-in-the-screen-shot split-screen approach – phew! It's almost worth giving up your Robinsons' for. However, splitting the screen has serious repercussions for the size of the playing area. The court becomes thinner and therefore appears far more three-dimensional than usual so you can't see much of it above the net. It seems strange when you compare it to other tennis programs, or even TV coverage, where you get a higher point of view. It takes time to get used to all this.

If you compare it to *Pro Tennis Tour 2* it's not very good – there is no skill in serving, and placing the ball exactly where you want is difficult. It's easier to return serves but harder to score aces, while adjusting the power

and style of your shot is tricky at best. Despite this, *Tennis Cup* is still one of the best tennis games you can get.

TURBO CUP

"I enjoyed this superb piece of software as much as I enjoyed being at the wheel of my Loricel Porsche," remarked an obviously highly bemused Rene Metg – whoever he is. Because this is a French game you get a choice of four frog racing circuits to bomb around on.

Why Rene chooses to wax lyrical about this game is hard to say. Driving games have to be pretty damn special to work and, if you are going for a track-based program, then *Indy 500* and *F1 Grand Prix* are much better. The challenge with these games lies in mastering the controls of the car to their fullest – something that *Turbo Cup* fails to deliver. But if *Outrun* is more your bag then you want lots of different scenery, cars and weather conditions. Unfortunately, all *Turbo Cup* offers you is a *Road Blasters*-style car and then it sends you round and round a boring track. Even the controls are a bit dodgy and it's far too easy to start skidding.

A quick mention must go to the different gear-changing methods. You can



● What comes after Round One? Round Two! The lady teaches the crowd to count.

use a second joystick, the keyboard or even the <Fire> button as the clutch, and the joystick as the gear lever. Alternatively, stick to the automatic gears and prepare to be let loose on that hot French tarmac.

Poor old Rene, no wonder why no one has ever heard of him. If his driving is as crap as this game then getting down to the corner shop in one piece must be an achievement. What a duffer.

PANZA KICK BOXING

Barbarian was good, *IK+* was great, but they came out years ago. *Final Blow*, *Final Fight* and *WWF* are the most recent arcade beat-'em-ups which, unfortunately, lost almost everything on conversion to the small screen. However, *Panza Kick Boxing*, is different. Specially created for home computer use, it's probably the best beat-'em-up you can get for your ST.

The game enables you to play in two ways. You can either dive right in and work out all the different manoeuvres by waggling the joystick around – and have great fun into the bargain – or

you can select some of the 55 moves and assign them to different joystick positions. It's best to start off with the first method to get used to the game, then select your moves. All this practice enables you to really start progressing. The graphics are excellent with some great character animation. Can this game really be from the same people who brought us *Turbo Cup*?

VERDICT: An excellent boxing game, a great tennis game and an awful driving game are what you get. Two out of three isn't bad and might even be worth shelling out your hard-earned cash for.

RICH PELLEY



● Zooming around the Paul Ricard circuit in *Turbo Cup*, is like driving around Birmingham city centre – there's nowhere to park and not much to see.



● Who is this man? One of those tedious oldie-types who always crops up on title screens or a veritable giant of the motor racing world? Perhaps we shall never know.

SPORT'S BEST

LORICEL £29.99

● *Panza Kick Boxing* is excellent. *Tennis Cup* is good, but not as good as *Pro Tennis Tour 2* and *Turbo Cup* is rubbish

STF RATING 72 %

GNOME ALONE

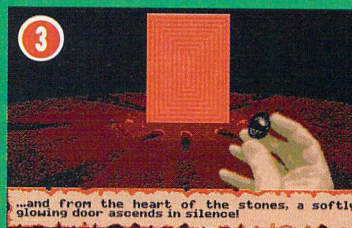
That ornamental fountain you made out of an old dwarf and a length of hosepipe looks great in the back garden. And it goes well with the medieval hanging casket Auntie Ethel gave you for your birthday



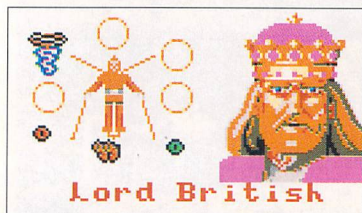
1 It's the same old story, you're sat at home watching the Gillette Blue 2 advert for the umpteenth time, when...



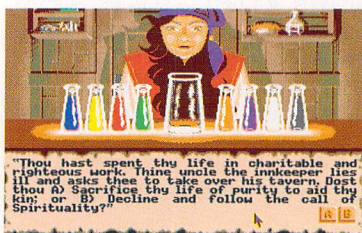
2 ...An almighty storm breaks, and in the back garden lightning strikes your favourite gnome...



3 ...You dash out only to find a black stone and a red moonstone. Step inside to be transported to Britannia.



Here's Lord British, ruler of Britannia and computerised alter-ego of Origin president Richard Garriot, who's currently working on *Ultima 7 Part 2 - Part 2?* Part 1 was only released on the PC.



Character generation the *Ultima* way. At beginning you visit a gypsy's hut. She asks all sorts of moral-dilemma type questions like "Your dog has bad breath. Do you (a) buy him a toothbrush or (b) kick him where it counts." The answers you give determine your character's personality and attributes.

ULTIMA 6

What's bigger than a big thing with a particularly big reason for being big? Richard Longhurst tried to find the answer to this pertinent question and comes up with a very big answer

What a monster. No, not the acid slug, the corpse, the scorpion or any of the other horrendous creatures that populate Britannia.

We're talking about the game itself. *Ultima 6*. A gargantuan role-playing feast to satisfy the voracious adventure-lust of even the most hardened role-playing game (RPG) addict. But what has it got to offer the rest of us? Well, for a start it's an easy game to learn how to play. The control system is icon based and only takes two minutes to

learn - click on the appropriate action icon, then click on the person or object you want to perform the action on. Simple. This leaves you plenty of time to find out what you are supposed to be doing in this vast land. The only guidance you get is that the place has been overrun by an army of gargoyles and only a band of heroes can do something to sort it out.

WEIRD SHRINES

At the start it's not clear what that something is, but after a few days' solid

adventuring, you learn that a vortex cube has to be filled with a rune from each of the eight Shrines of Virtue. All this weird stuff isn't so bad but because you are not told about it on the back of the box or in the manual, you have to work it all out yourself and it makes a hard game even harder.

Initial explorations aren't helped by the signposts or the map supplied with the game. Because Britannia is such an advanced game world, it has its own alphabet that makes a wall of hieroglyphics look like a Letraset. Admittedly, it provides a very cosy atmosphere for experienced gamers, who appreciate the challenge that deciphering signposts provides, but it's baffling for novice adventurers who want to get on with the serious business of mauling monsters. Walking around is slow enough in itself, but travelling is even more of a chore when you're not exactly sure where you are or where you're going.

MAGES, MERCHANTS AND MAYORS

Some games, notably *MicroProse's Flames of Freedom* fall into the trap of creating a huge world and then filling it with absolutely nothing. Not so in *Ultima 6*. Britannia is stuffed full with cities, dungeons and islands, all of which have to be visited at various stages during the quest. But most importantly there are people. Lots of them. Mages, merchants, mayors, pirates, healers. You name it, they live in Britannia. By and large they're friendly, but they're also a mercenary bunch and refuse to do anything for you unless you do something for them first. So, alongside the broad theme of saving Britannia, your party has to run errands and perform quests for a variety of unsavoury characters.

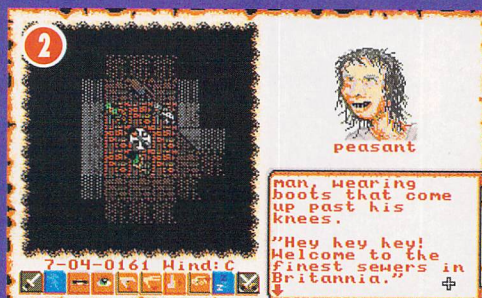
Ultima 6 is a fine role-playing game, but for the novice adventurer, every part of it is a daunting challenge. Take the magic system for example - not only does each spell need a certain

DOWN IN THE SEWER AT MIDNIGHT

In which our intrepid explorers find themselves in some very sticky - and whiffy - situations and gasp in awe at the size of Lord British's plumbing



1 Somewhere in Lord British's enormous castle is the entrance to his equally enormous sewer. What does this tell us about the noble's alimentary disposition? Who knows. Anyway, let's hope there's something worth killing down there.



2 Down the ladder and into the sewer. Hello, what's this? A peasant. What a lovely place to live. No mod cons, hot and cold running sewage. Mind you, there's not much traffic. The peasant's a scruffy old flea bag and not worth the effort, so we soldier on.



3 Curiouser and curiouser - a ladder down to the next level. How deep is this sewer going to get? Soon we'll be up to our necks in it. Besides, this place is beginning to get seriously smelly. Aren't you glad *Ultima* doesn't have a scratch 'n' sniff card?

SCREENING PROCESS

Thank Lord British for a simple control system. Now what happened to those runes Hooter left on the table...

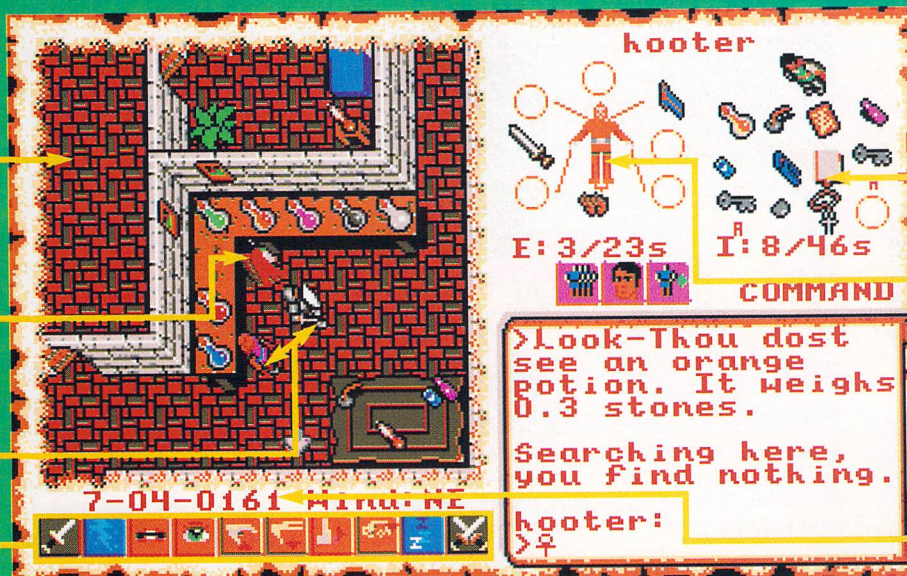
Here's where all the action takes place. Make sure you search every location, you never know what you might find. Those potions look like they might be useful.

The main man, or the Avatar as he's known in Britannia. The character that you control and the one who'll take all the glory if the party ever gets out of this alive.

Iolo Shamino Dupre
The three amigos who are a lot less funny, but definitely more dangerous, than Steve Martin and his cronies.

Use these icons to control your character's actions, such as ordering them to fight or use magic. The

sword on the far right is used to make the whole party attack at once. If you forget, your character is liable to get beaten to death while the others stand around and watch.



The inventory shows what the character is carrying. It's best to distribute items evenly between the party members, because they get tired and niggly if they have to carry too much gear.

This display shows what the character is holding or using. It's up to you what they wear but chain-mail and steel-plated armour is preferable to fancy cloth tunics and dainty leather booties.

The date and time of day. Britannia has a nasty habit of getting dark at about 7pm and it's not safe to wander around at night. It's best to rest or go inside.

number of ingredients, which you have to find or buy, but the spells have to be bought from one of Britannia's five mages. And where do they live? Surprise, surprise, you have to find them yourself. It's all an uphill struggle.

In fact, playing *Ultima 6* is very much like starting to climb a monstrous mountain. The view is great when you reach the top, it might even be good when you're half way up. It's fun walking on the flat parts and exciting clambering up the steep bits. But when you're standing at the bottom the whole thing looks too tough for words. And anyway, if you haven't climbed a hill before, you want to do some small ones first.

VERDICT: The over-bearing impression that *Ultima 6* gives is one of complete

and utter hugeness. It's a monstrous adventure that could keep you going for months, if not years. There's a vast game world to be explored, plenty of challenging sub-quests, and more than enough characters to interrogate. You encounter a wide range of monsters and there are also over 70 spells to learn. But the game's enormity is also its main problem.

Moving around is so slow and tedious that you can't help feeling there must be better ways to spend the rest of your life than walking around Britannia. Sure, there's lots to do, but it simply takes too long to get from one place to another.

The game isn't the friendliest RPG around, the magic system is too complicated and when travelling you're hin-

dered by Britannia's alphabet. If you're a newcomer to role-playing, your best bet is to choose *Legend* or *Shadowlands*, though if you're after some seriously heavy-duty adventuring, *Ultima 6* is an ideal choice.

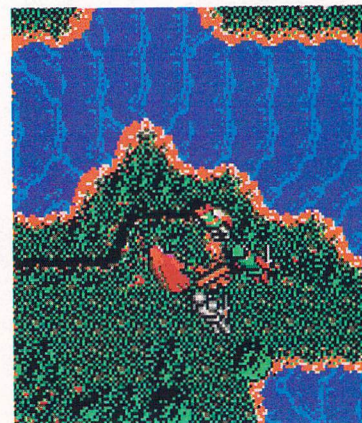
RICHARD LONGHURST

ULTIMA 6

MINDSCAPE £30.99

● Enormous adventure to keep you going for hours and hours, but the task might be too daunting for new adventurers.

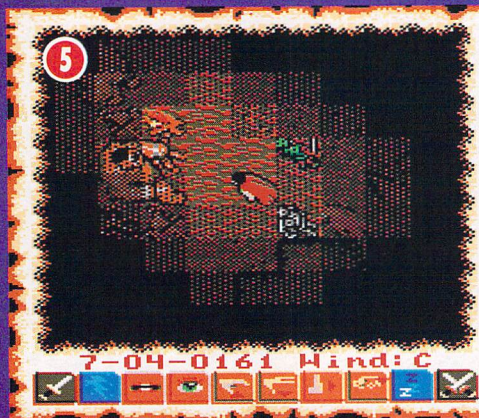
STF RATING 70 %



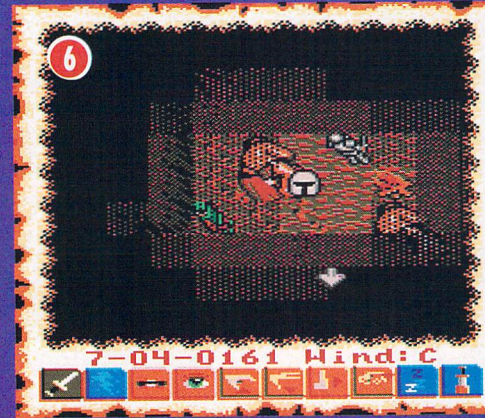
● During the day there's plenty to see and do in Britannia. If only we could find a way to get across this river. Anyone know how to swim?



● Not only is it smelly, it's also starting to get dark. There are bound to be some big bad beasties down here somewhere. We can hear them, if only we could see them. It's getting a bit scary. Those beasties might hurt us, perhaps we should go back.



● Too late. The party runs into a menagerie of cyclopes and trolls. A lengthy battle follows in which the heroic Hooter does more than his fair share of fighting and takes more than his fair share of body blows. Anyone seen an ambulance?

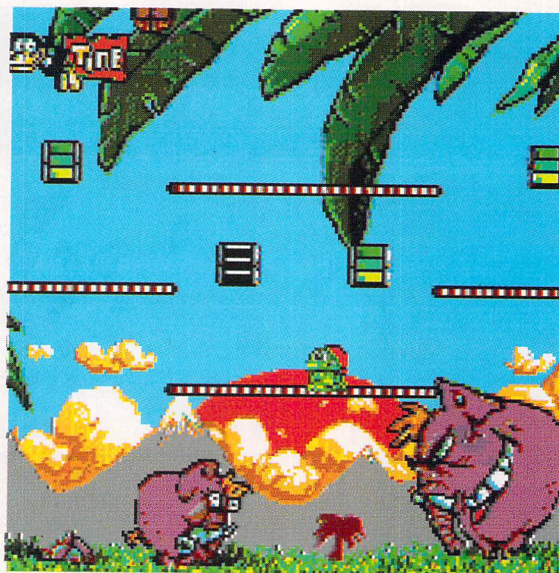


● The enemies lie slain on the sewer floor. A quick search reveals some useful goodies that should come in handy later on. Hooter's down to six hit-points from a maximum of 90, so it's back to see Lord British, who can heal with a wave of his hand.

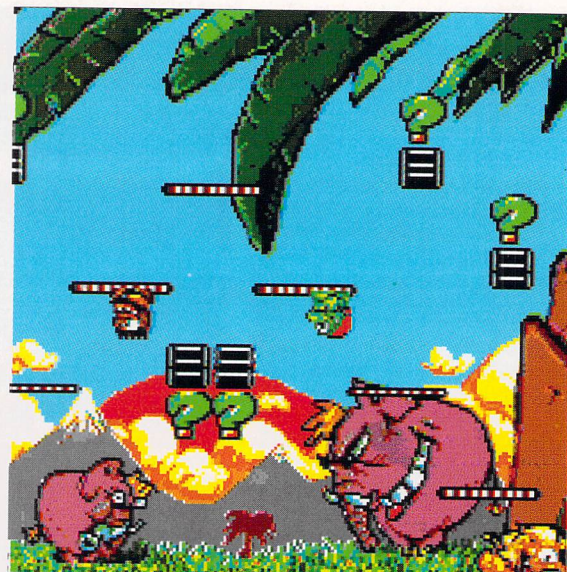
COOL CROC TWINS

Not since the "see-ya-later-alligator, in-a-while-crocodile" hep '50s has anyone tried to make green reptiles trendy. They just weren't cool. But now Empire are trying to challenge the stereotype with their latest platform-hopping, block-butting heroes – Punk and Funk. Despite their names, the attempt at cool falls down with the plot. Y'see, Punk and Funk are in love with the same woman, the independently-minded Daisy Crocette – or should that be Coquette? Daisy simply can't make up her mind which of the toothsome two-some to curl up with. Eventually, having decided that love isn't for her, smart Daisy runs off to a crockery. Hmmm.

Completely failing to get the hint, Punk and Funk chase after her. But Daisy just keeps on running; she's got a lot of stamina – it takes 60 levels for the Kriss Krosses of the croc world to catch her. 60 levels? Sounds great, eh? Um, sort of. If anything, this number of levels is perhaps a little too much when you have to go back to the very beginning whenever you die. Argh! Sheer hell, that's what it is. The idea behind *Cool*



● This is the first screen and, after about four attempts, gets incredibly boring. Unfortunately, every time you fail a screen, you're flung back to the beginning. Sob! Just like trying to cash your giro in the Post Office, in fact.



● The question marks are a bit like the rocks in later levels. You must get to the other side of the blocks to switch on the lights. Unlike the rocks, however, question marks don't send you spinning or affect your energy.

Croc Twins is pretty simple in theory. All you have to do is wander around the edge of the screen, jump onto platforms and headbutt blocks which light up when you hit them. Oh, and you have to avoid what look like incredibly nasty little heads with teeth.

SOUNDS EASY, EH?

If that was all there was to *Cool Croc Twins* it'd be an OK, if rather uninspiring, little game. Unfortunately, Empire have gone for a terrible control mechanism. Punk and Funk move around the edge of the screen, clockwise or anti-clockwise. Problems begin when they walk upside down – as crocs do – and it all becomes a bit confusing. They can also zoom sideways to butt blocks, hit nasties in mid-air and pick up bonuses.

VERDICT: At first a lot of the screens look completely impossible because the

light-blocks are cordoned off by various obstacles. But there's always a way although it usually takes a couple of attempts before you work out how to complete a screen. This isn't too bad, but combined with the if-you're-dead-go-back-to-the-beginning rule gets incredibly tiresome. The last straw is the way your health/life/whatever-crocs-have is decimated whenever you bump into nasties. Sometimes they're so hard to see you find yourself wandering into them without even realising it. The easiest way to deal with this is to try and kill them, but it just takes up so much time.

If you've got the patience to sit through the same screen countless times, then *Cool Croc Twins* could be fun. The two-player option looks like it might be better than the lone croc mode. Then again, maybe not.

The best thing about this game is the way you can make your croc zoom

across the screen sideways, bashing into baddies and bonuses. It's a far more appealing way to pass an afternoon than playing the actual game. As for the sound, well, from the character's names you think you're in for an aural treat. Instead, your ears are assaulted by the sort of muzak that gymnasts choose for their routines. Punk and Funk, indeed.

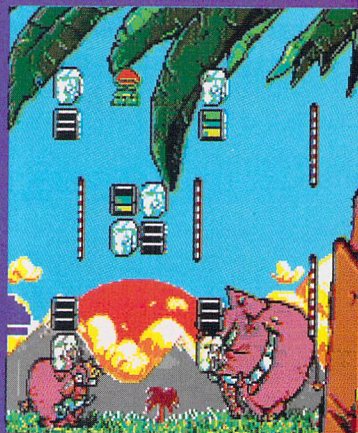
LINDA BARKER

COOL CROC TWINS

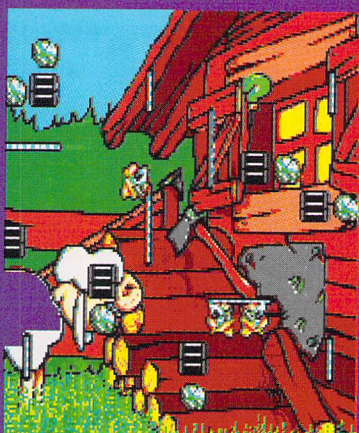
EMPIRE £25.99

● Nigglingly annoying reptilian platformer. If this was addictive, it'd be ace. But, erm, it isn't. Disappointing sound and graphics.

STF RATING 61 %



● The idea here is to bounce off the sides, onto the sideways platforms and aim for the blocks head first. When you've done that, take time out to laugh at those stupid elephants.



● See those funny rock things? They stop you butting the blocks. They also hurt a bit when you crash into them, so avoid them if possible – unless, of course, you want to run out of energy.

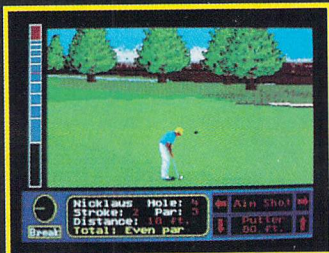


● This is the end, and you haven't succeeded in getting croc to his loved one. Daisy girl is still skipping merrily through the crockery. So what's he looking so happy about, eh?

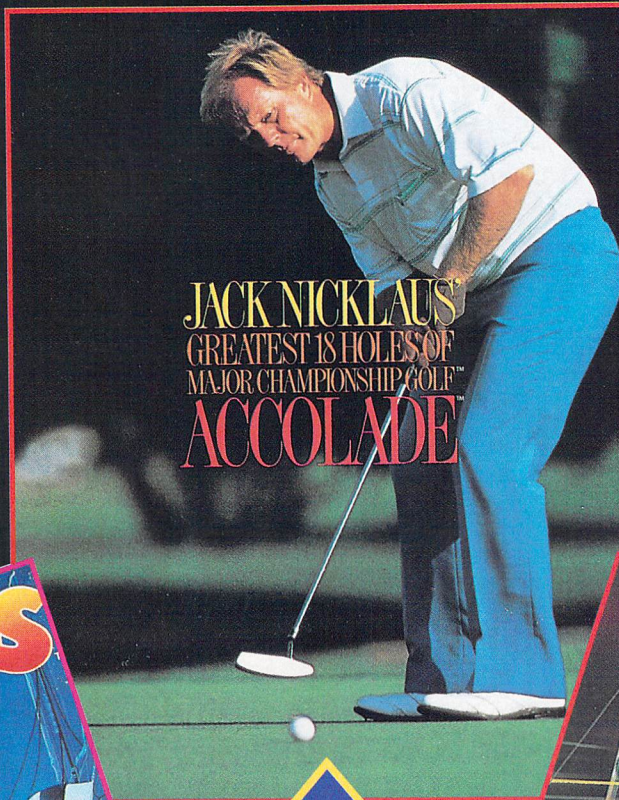


● *Cool Croc Twins* has got a ready-filled-in score table. This is designed especially so that when you get to type in your not-so-great score, you feel embarrassingly inadequate.

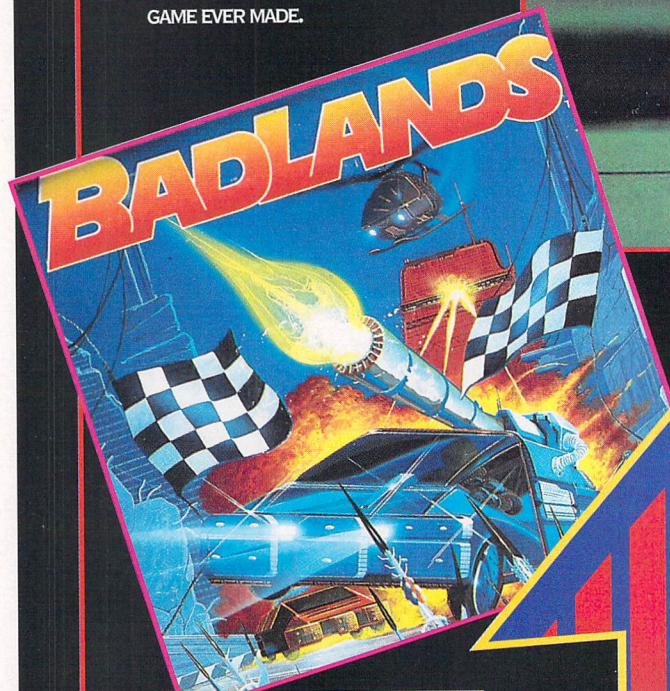
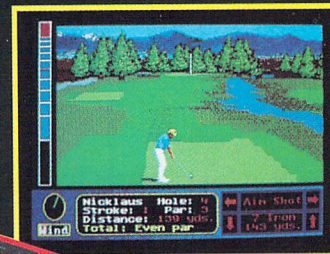
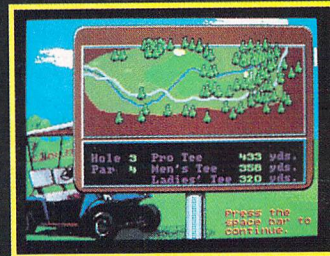
AIM ONLY FOR THE TOP



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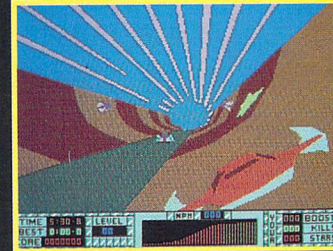
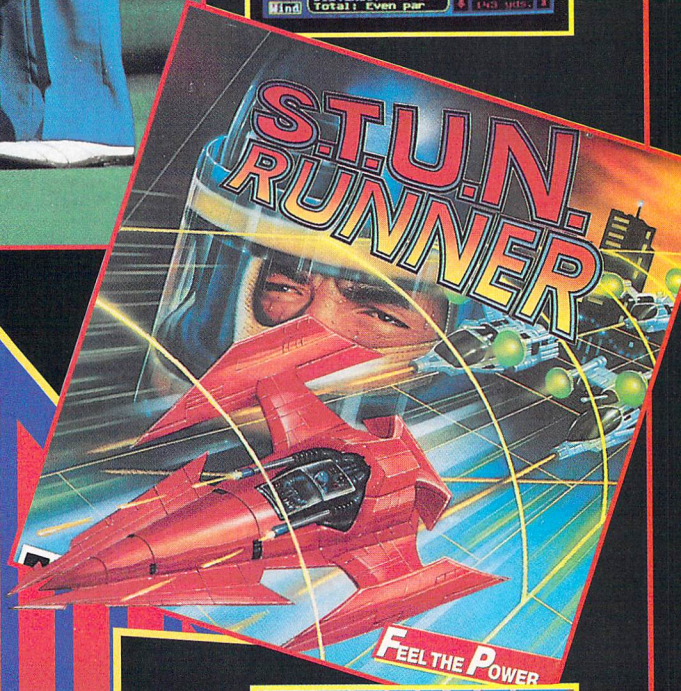


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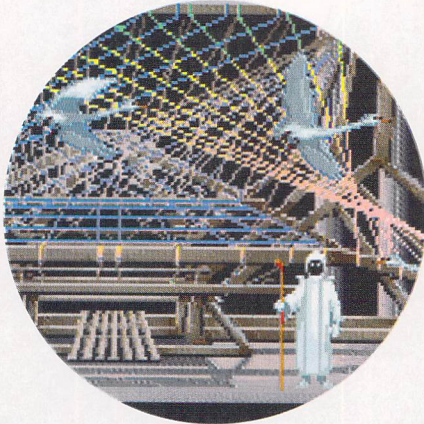
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Sherlock Holmes. The first game with full-motion video footage. Actors and actresses were used for the graphics.



Loom on CD-ROM. LucasArts employed actors and actresses to create the speech. It's truly awesome!



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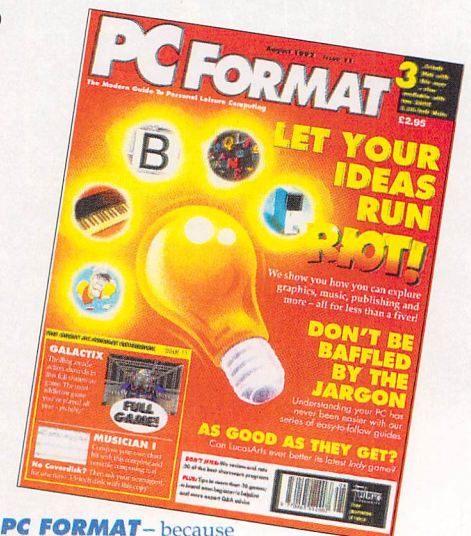
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The home micro world is changing all the time. New computers come and go, compatibility is ignored and software support is more changeable than the weather. Only one machine has been with us for over 10 years. Only one is an industry standard. Only one can be continually upgraded to keep pace with new technology. The PC is where it's at.

In the past the PC has been thought of as a business machine. Now every games publisher in the world is developing unbelievable games for the PC. Music, graphics, desktop video and multimedia are just a handful of the applications you can use with a home PC – and the software you need isn't expensive either. Discover the power of the PC with **PC FORMAT** – the only PC magazine NOT to take the PC seriously. In the latest issue – out now – we're interviewing programmer Peter Molyneux and finding out what developers need to do to promote the PC even more. We're looking at cheap ways to exploit the PC's enormous power, including a look at graphics, music, programming and more. We're also reviewing and rating the new game releases including *Indiana Jones and the Fate of Atlantis* and *World Tennis*.

IBM 386SX/25s2 is one of the latest PCs. It costs £827. It comes with a 33MHz processor (that's over 3 times faster than a standard ST and 1.5 times faster than a Falcon), 2MBytes of internal RAM, a 14-inch super VGA monitor (capable of showing 256 colours at a resolution of 1024 x 768), a

3.5-inch high density floppy drive (capable of storing 1.44MBytes of data and 100MByte hard drive. Treat yourself. Buy a copy of **PC FORMAT**, see what you can do with a PC and then call 081 902 9922 to buy your machine. You need never lag behind the technology again.



PC FORMAT – because you don't want to take the PC seriously

DON'T MISS THE LATEST ISSUE OF PC FORMAT OUT NOW

SHUTTLE

Great, super, smashing – it's *Loom 2*: a game all about weaving! Sorry to disappoint you, but it's actually all about climbing into what is lovingly referred to as a "Space Shuttle" and then going to the moon.

Sounds simple doesn't it? Well, it's not. *Shuttle* is an incredibly complicated game. Except, it's not really a game, or even a simulation in the normal sense. It's sort of a complete run-down on everything the crew of a shuttle has to do. In fact, it's so realistic, you might even have to run nervously to the lavatory several times before the flight.

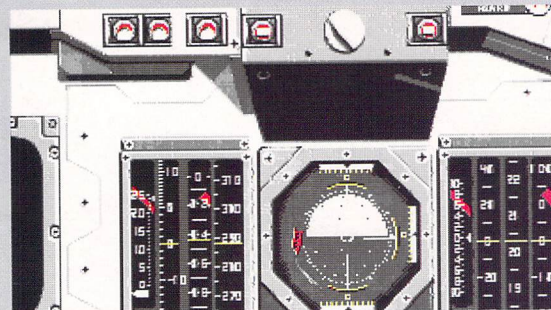
There are 12 missions. Each is as complicated as, er, all the others. You can launch satellites in space, repair the Hubble telescope or recover broken

satellites. You can even do military things so secret they can't be printed here. Each mission involves prepping the ship, hitting the right buttons at the right time and steering it around the vast inky blackness of the cosmos. You've then got to steer it at the vast beige brownness of the desert and land it on the small concretey thinness of the runway. Tough prospect, huh?

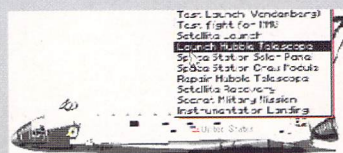
Instead of just pressing keys to do things (like most sims) you must select the correct panel in the shuttle's cockpit, then press the right key or select the switch with the mouse. There are dozens of in-cockpit views, most of which look like the wiring diagram of your ST. Do you really need – or even want to know all this stuff?

Well, not all of it. You can get your ST to do a large amount of the boring work while you have fun swinging round the Earth and spelling out rude words in smoke trails 40 miles long. But even on simplest level you've still got to deal with a massive amount of technical info. The colour even drained from Clive

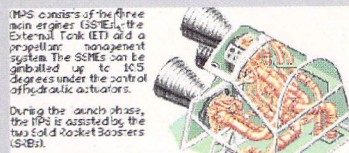
SATELLITE OF LURVE



● "Where's the handbrake? I can't find the handbrake, Alan!" "It's between your legs, Martin. No, not that. That's your..." "What? I'll just give it a good pull. Oh dear, I didn't really mean to do that."



● "Roll up, roll up. Get your missions here. Hows about a trip to Venus? Fancy nicking a Soviet satellite? No? What about redoing the grouting on those heat-sensitive tiles, then?"



● The Mk 2 shuttle engine makes an ideal rain-shelter at pop festivals. Turned upside down, it becomes a perfect receptacle for storing Smarties, Minstrels or any ovoid confectionery.

Parker's moustache when he saw the manual – and he's our techie wizard.

Apart from the multitude of control panel views, you can view the shuttle from outside as well. This can be most impressive, especially when you catapult yourself into orbit and get a

glimpse of the boosters dropping away, the main tank jettisoning and the co-pilot being vacuum-sucked through the toilet into the soulness eternal night.

Landing is far too complicated to even mention here... Er, except to say that the shuttle flies smoothly, drops like a stone and fully expects you to fiddle with 20 tricky computers while the desert rushes up to meet you like a big rocky arid thing. May the force be with you because NASA doesn't seem to like making your landing too easy.

VERDICT: Buy *Shuttle* if you really want to know how these things work. It's a triumph of technical precision. But although there are some very pretty 3D graphics, it's not a game. You have to read the manual. You must understand what's going on. And you've got to be prepared for a lot of disk accessing and an update rate that is slower than a kipping whale's heartbeat.

It's well presented with tons of menus, loads of keyboard shortcuts and a fair degree of help when you don't really need any. But it's a massive program to get to grips with – to wring the best from it you might have to treat it like a big project – keeping you at your ST over the long winter months. So there you go. And not a single 7-Up gag in sight.

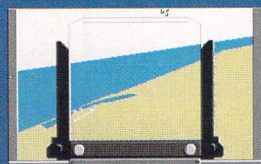
JAMES LEACH

NOT LANDING – THE EVERYDAY STORY OF INEPT FOLK

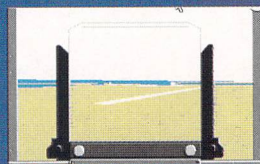
...Or how to take a multi-million dollar piece of hardware and smash it into thousands of tiny pieces all over the Arizona desert. Mind that camel!



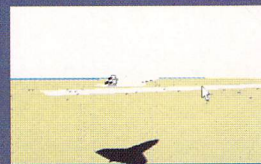
● "Look, Andrew, a desert. I told you we were heading in the right direction. And where there's a desert, there must be... a runway! Am I right or am I right?"



● "Ha ha. Very clever, Marjorie. But, you've failed to notice we're heading away from your supposed "runway." And what are you going to do about that, eh?"



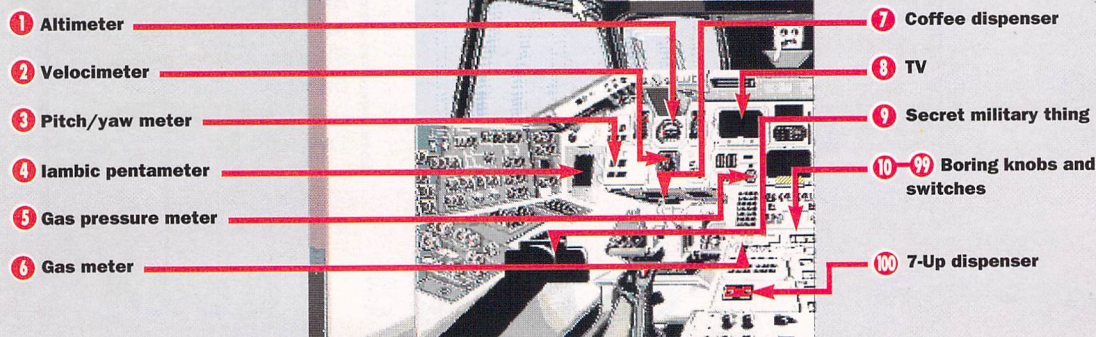
● "See? With one turn, we're back on course. You never trust me to get anything right. You think just because I'm a woman, I can't do the simplest..."



● "Look out! You silly cow, you've forgotten to lower the flamin' undercarriage! I told you I should have driven. Now we're bound to lose the no-claims bonus..."

HOW TO DO IT

Those extremely complex cockpit controls in full



SHUTTLE

VIRGIN £25.99

● More complex than F19, Mig 29 and *Their Finest Hour* put together. And slower than all these as well. Unlike any other game around, really.

STF RATING 78 %

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HOOK



Sorry, but the *Hook* movie was one of the most utterly crap films of last year. It was self-indulgent and butchered the Peter Pan story beyond all belief. Come on, Neverland instead of Neverneverland? Peter Banning? Why didn't they just go the whole hog and replace Captain Hook with Sergeant Stump or something?

Anyway, Ocean's latest piece of licensed software – *Hook*, no less – takes its inspiration from the Spielberg movie. The game is a graphic adventure, in the Lucasfilm mould, where you travel to Neverland and rescue Peter



● A bunch of surly, uncouth pirates indulge in a spot of on-board entertainment. If only you could get close enough to see what's actually going on there...

Pan's kidnapped sprogs – oh, and you get to recapture his youth along the way as well.

From the layout of the main game screen, it's obvious the whole game has been heavily influenced by *Monkey Island*. The top portion of the screen

shows your surroundings which are fully interactive – to go somewhere you just click on the door or passage and Peter moves accordingly. At the bottom of the screen are five main icons: Look, Talk, Pick Up, Use and Give. There's an inventory window at the very bottom of the screen as well.

MONKEY PUZZLE

Plenty of colourful characters are scattered throughout the game, waiting for you to chat to them. However, they may be less forthcoming at the beginning of the game. To talk to someone, you click first on the Talk icon, then on the person in question.

Like *Monkey Island*, *Hook* gives you several problems to solve. And they're also pitched at about the same difficulty level. These puzzles are linear in design, so that to complete one large problem you have to solve three or four smaller challenges along the way.

VERDICT: It's all terribly reminiscent of *Monkey Island*. However, where that game is hysterical and innovative, *Hook* is slightly amusing and derivative. Lucasfilm's wonderful interface has been copied, but somehow it's not as flexible or, indeed, intuitive.

Graphically the game is brilliant. It has a cartoon feel to it with the backgrounds and sprites all interacting really well together. Movement around the gameworld is quick with the characters nipping in and out of the screen in very fast perspective. The game has also got samples mixed in with the chip music.

While *Hook* is well programmed and a lot of fun to play, it seems to lack that spark which makes *Lure of the Temptress* or *Monkey Island* so exciting. It's certainly not the kind of game you want to play all night until *Get Stuffed* comes on.

ANDY HUTCHINSON

DRILLER KILLER

Have you made an appointment with Death Dentist? He dopes his victims with strawberry-flavoured mouthwash, gives them fillings they don't need, then sucks out their brains with the saliva extractor



● Outside Dr Chops' place. Got a toothache? Go somewhere else.



● What a smoothie! Well, wouldn't you want your dental health in the hands of a violent, myopic lunatic?



● In an excruciating scene, reminiscent of *Marathon Man*, Peter offers a couple of his attractive assets to Chops, the sadistic dentist.

HOOK

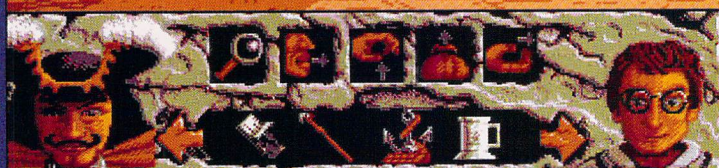
OCEAN £25.99

● A polished but ultimately unsatisfying game. Buy *Hook* only if you're a massive fan of graphic adventures or have pleasant childhood memories of Peter Pan. Then expect to be disappointed.

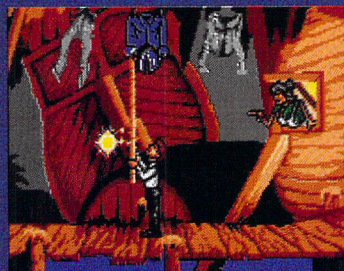
STF RATING 79 %

ROUND THE TOWN SQUARE

If you wander around you find all sorts of doors leading to interesting places and people. Just remember the task in hand, though...



● "Having a swinging time." "Er, excuse me, your kids have been kidnapped by an evil pirate. Don't you think you ought to go and try to rescue them?"



● "What an attractive jacket. I think I'll have that for myself." "Oi!" "Oops." Moral: Don't do this at home, kids. Unless, of course...



● On the Dead Man's Pier. Plenty of options for Peter to grapple with here... Forget what your mother told you about talking to strange men.

INTERNATIONAL SPORTS CHALLENGE

For your money you get six different sports – swimming, diving, cycling, show-jumping, shooting and a marathon – covering 21 individual events. You also get a meaty ring-bound instruction booklet and some foamy stuff. Give your pet gerbil the foam padding so that, although you end up with some pretty feeble sports sims, at least he gets somewhere snug to sleep.

You can either work your way through the game as a whole or you can practise individual events. First up is the marathon. Obviously, this isn't a straight waggle – sitting in front of your ST frantically waggling your joystick for 26 miles would hardly be fun. Not to mention knacker.

Empire have elected to make it a management event instead – you control the effort, speed and rhythm at which your athlete runs, along with requests for liquid and energy refreshment. The marathon, you see, continues between events. So allowing for the weather, the course and your runner's condition, you can nip off and try another event, checking occasionally to see how he's doing. This one good feature is, sadly, let down by the rest of the program.

The sheer lack of fun is the fundamental problem with *International Sports Challenge*. Plainly, none of the

events are entertaining possibly because the packaging takes itself far too seriously. For example, a whole four pages in the manual is dedicated to diving. You don't need to bother with this because we gave you a demo version of the diving bit with Cover Disk 37 – to order your copy if you missed it, turn to page 40.

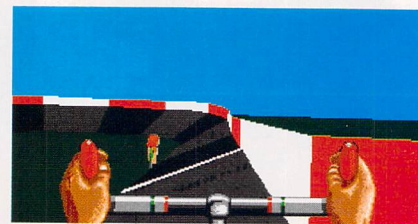
COORDINATION FRENZY

The manual explains how the different diving events are divided up, what the dives look like and how they are accomplished. Then you discover the control method – first stop, a pulsating circle at its maximum radius – for maximum power – then you have to move a ball around the outside of the circle so as to closely follow the path of a moving ball orbiting inside the circle. What has this got to do with diving? You spend your entire time staring at this small circle, with the diver's actions becoming of supreme indifference to you.

The swimming is no better. Methodically move the joystick back and right for strokes, push the <Fire> button when your ST requests you to breathe. Different strokes require different speeds of waggling – and that is really all there is to it. What crap. At least Empire have gone for something differ-



● Ya! boy, ya! Oh no, he's breaking into a frantic gallop and trying to work out how to avoid that next fence, I can feel it. Where the hell is Harvey Smith when you need him?



● Pump those pedals with enough ferocity and you should easily be able to catch up with that no-hope pacemaker who's currently languishing in first place.

ent with the cycling and show-jumping – namely solid 3D graphics. This makes a welcome change from the flat, badly animated and, quite frankly, insulting graphics you see in the other two events. The cycling is still awful, though. Looking like something out of *Stunt Car Racer* and *Powerdrome*, the walls of an oval track scroll smoothly towards you. All you have to do is keep a steady left/right motion with the joystick for maximum speed and move up and down the track to cut corners and avoid – even overtake – your 3D solid vector opponent. The fact that you can't crash into the walls or spin off the track only accentuates the game's terminal lack of realism and high boredom factor.

Like the cycling, the show-jumping gives you a first person perspective of the proceedings. You sit on a horse whose head appears in the middle of the screen. You move the joystick forward to "accelerate," back to "brake" and press <Fire> to jump. You make the old nag gallop around the arena, jump the jumps in order and score faults if you miss or knock off the barri-

ers. The only bit requiring any skill is getting the timing right to line up with the jump. Well it's *quite* interesting, but after the first few attempts your initial enthusiasm soon falls away.

The shooting is the best event, but it's still not a patch on a similar section of *Hypersports* that came out on the Spectrum a decade ago.

VERDICT: The entire compilation is dated beyond belief. Is there really any room for these multi-event doobies on your ST today? The market for these games peaked when the vastly superior *Olympic Challenge* came out in 1988. *International Sports Challenge* may offer a selection of slightly different events but, to even consider it, you have to be one orange tangy bit short of a Jaffa cake.

RICH PELLEY

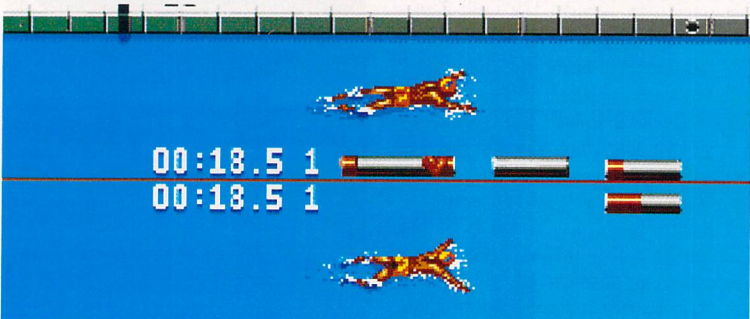
GOLD MEDALS? WHAT GOLD MEDALS?

Sports sims are tricky to get right and Empire have got this one spot on. They steer clear of comedy events and evoke some of the feeling of these sports. The show jumping is brilliant – you ride up out of your seat as the horse jumps – and the horse's pace has been well weighted. It's the closest you can get to show jumping

on your ST. The cycling, with its slick graphics, is fun, while the diving is tricky. If you relish a challenge and like to learn how to control a game, this is the one for you.

Alternative STF Rating: 83%

ANDY HUTCHINSON



● Swimming is easy as long as you don't forget to breathe – lack of oxygen inhibits floating and means you end up kissing the bottom of the pool.



● You perform an immensely artistic lunge from the diving board and sail through the air with astounding grace. It's just such a shame you always land belly-first.

INTERNATIONAL SPORTS CHALLENGE

EMPIRE £29.99

● There's quite a mixture of events, but they are all highly unplayable and terminally boring. For a sports sim to receive praise in 1992, it has to do something noticeably new. *International Sports Challenge* doesn't.

STF RATING 43 %



● At the inn, the respective captains boast about their gains over a swift half of mead – all except for one poor chap who only managed to discover a pair of brown and orange loon pants.

DISCOVERY – THE STEPS OF COLUMBUS

Columbus “discovered” America. That is America was already there, but Columbus landed on it and told everyone about it when he got back. Except he forgot to mention that the Vikings had got there 500 years before. Right, there’s your background info, now on with the game.

The overall objectives are to explore and discover uncharted areas and make more money than any of the other exploring nations. So, lots of boldly going where no one has gone before, with a bit of capitalism thrown in. But would Columbus – or indeed, Captain Kirk – approve?

The game is an icon-driven, strategic type of affair requiring lots of thinking and contemplating, but with very few opportunities to get in there with the joystick and fend off bloodthirsty pirates. Four game types are available: Free For All, or survival of the richest; Eldorado, which entails a quick jaunt down to legendary gold-rush country; Land Race, where the nation which owns the most land after 50 years is the victor, and Cash Race, or screw everything else and try to accumulate as much booty as possible.

VERDICT: A plodding, ultimately unexciting experience, *Discovery* just



● Bloke with telescope: “Land ahoy!” Columbus: “Hey, I’m the one who names the previously uncharted territories around here!” Bloke with telescope: “No, you idiot. I meant that there’s land in sight.” Columbus: “Oh.”

doesn’t have that sense of history that it so obviously strives for and it takes a tiresome amount of time before you have anything to show for your efforts.

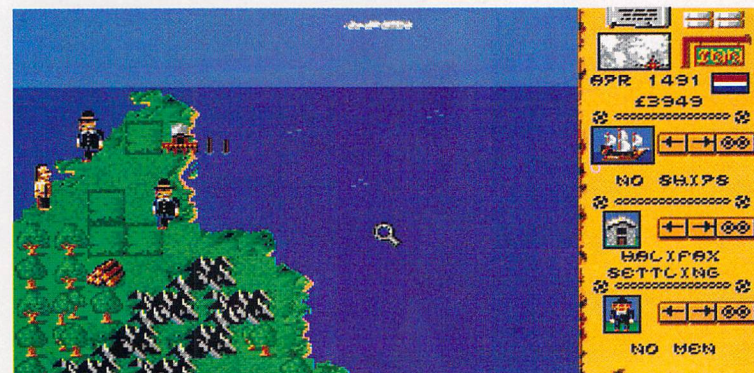
ANDY LOWE

DISCOVERY – THE STEPS OF COLUMBUS

IMPRESSIONS £24.99

● For seasoned strategy buffs, probably worth a look. Sadly, for everyone else it’s a case of pretty graphics, shame about the gameplay.

STF RATING 55 %



● Having landed, with nearly four grand in the bank, it’s time to “settle”... Perhaps a sturdy fort for defence or a juicy warehouse for a spot of storage space?

FORMAT RATINGS REVIEWED

How did *FORMAT* rate the games reviewed over the last three months?

FIRE & ICE	page 74	94%
WIZKID	STF 37	92%
EPIC	STF 37	91%
EMLYN HUGHES INT’L SOCCER	page 94	90%
PARASOL STARS	STF 37	91%
AWARD WINNERS	STF 36	90%
ISHAR – LEGEND OF THE FORTRESS	STF 37	90%
Legend	STF 36	89%
Gobliins	STF 36	87%
Formula One Grand Prix	STF 36	81%
Airbus A320	STF 36	79%
Hook	page 85	79%
Final Command	page 94	78%
Saint Dragon	STF 36	78%
Shuttle	page 83	78%
Steg	page 94	75%
The Addams Family	STF 37	74%
Warriors of Releyne	STF 37	74%
Last Ninja 3	STF 36	72%
Sports Best	page 77	72%
Steel Empire	STF 36	71%
Winter Super Sports '92	STF 37	71%
BSS Jane Seynour	page 95	70%
Samurai – TWOTW	STF 36	70%
Ultima 6	page 78	70%
Leander	STF 36	68%
Potsworth and Co	STF 36	68%
Superski 2	STF 36	68%
Air Bucks	page 72	65%
Cartoon Collection	STF 37	64%
Utopia – The New Worlds	STF 36	64%
Popeye 2	page 72	63%
Cool Croc Twins	page 80	61%
Columbus	page 87	55%
Italy 1990	page 95	52%
Space Crusade	STF 37	50%
Spike in Transylvania	page 95	49%
Quattro Fighters	STF 36	48%
Psyborg	STF 36	46%
Ghouls 'n' Ghosts	STF 36	44%
International Sports Challenge	page 86	43%
Space Gun	STF 36	32%

NOTE: Games in red are reviewed in this issue

GAMEBUSTERS

Wasn't it Thomas Edison who said, "You can but try"? Of course, he was drunk at the time, but there's still a lesson for us all there. Quite what it is remains a secret, but it's nothing to do with Gamebusters anyway, as Ed Ricketts eventually worked out



● "Course, it was all fields then. Makes you think, doesn't it? As soon as you're born, you start to die, sob!"

EPIC OCEAN

For some bizarre reason – like we were all watching *Eldorado* repeats, or something, at the time – we forgot to include the level codes when we did the solution to this much-maligned but actually extremely good blaster in *STF 37*. So, here they are, from Patrick Petrossians of Liege in Belgium:

- 2: CEPHEUS and APIS
- 3: MUSCA
- 4: PYXIS
- 5: CETUS
- 6: FORNAX
- 7: CAELUM
- 8: CORVUS



● A bit we missed out of the solution: pick up that arrow on the floor, take it to the bearded gentleman and ask for the partridge. When he hits you, take three steps to the left, lie down and pretend you're Lebanese...



● ...then, when it all gets too much, turn off your ST, nip down to you local video shop and hire *Wild At Heart*. Good, isn't it?

GOBLIINS DREAM FACTORY

Jon Clay of South Yorkshire, you are accused of sending in a complete solutions to this odd game and winning yourself £25 for it. How do you plead?
(Well, you get down on your hands and knees and... sorry. Old gag.)



SCENE 1

Asgard: Punch right side of archway.

Oups: Pick up horn and use it.

Ig: Cast spell on the branch that falls from the tree.

Oups: Pick up pickaxe.

SCENE 2

Ig: Cast spell on the second and fourth apples (counting from left to right).

As: Punch both apples.

Oups: Get apples and drop them in the gap to form a bridge. Get pickaxe again and use it on the flashing diamond in the wall. Get diamond.

SCENE 3

Oups: Use diamond on the front door of the house.

SCENE 4

Oups: Get pot 1 (on left table).

Ig: Cast spell on the plant near the door.

As: Climb up the plant near the door.

Oups: Use pot on the other plant.

As: Punch the big book on table.

Oups: Climb up the book and give diamond to the wizard.

SCENE 5

Ig: Cast spell on the coil of rope near statue's wrist.

As: Climb the rope and punch statue's eye.

Oups: Stand on the statue's tongue.

Ig: Cast spell on the sign above the coffin, then quickly stand on the statue's tongue.

As: Punch the eye. Wait until the monster goes back into his coffin, then punch the eye again.

Oups: Get the mushroom.

SCENE 6

As: Climb up the web that's connected to the spider and then climb down the first empty web.

Oups: Get the gun and use it on the spider



● "So you see, little fictional character, I was lying about the ingredients. Now sod off and leave me alone."

HELTER SKELTER

AUDIOGENIC

This is an excellent cheat – go to the funfair and nick all the mats from the bottom of the Helter Skelter. Sell the mats to a carpet salesman. Buy a yacht in the Bahamas. Well done, you've cheated the taxman.

Seriously now, play a two player game. Kill off the player with the lower number of lives, then when the other player dies, player one reappears with 99 lives. Then when player one dies, player two reappears... and so on. When you reach the end, the game starts again with invisible platforms.

NEW ZEALAND STORY

OCEAN

This is the clean version of a very old cheat, from **Alex Christaki** of **Devon**. On the title screen type **FLUFFYKIWI** to get infinite lives. Press <Help> during the game to skip levels. As Alex points out, you can now complete the game without even playing it. Great.

on the far right (make sure you stand right back into the cave). Use the gun on the spider who's on the far left.
Ig: Cast spell on spider.
Oups: Get elixir.

SCENE 7

Ig: Cast spell on the bag of seeds.
Oups: Use seeds on ploughed land.
As: When birds come onto the screen, punch the scarecrow.
Ig: Stand on the end of the branch and cast spell on the second cloud.
Oups: Get flower and give it to the wizard.

SCENE 8

Ig: Cast spell on the skeleton, then cast spell on the bone. Stand on the edge of the plank near the small ladder.
Oups: Use the flute on coiled snake.
As: Climb the snake and punch the pile of rocks at the far right.
Oups: Stand on the same plank as Ig.
As: Punch the pile of rocks.

SCENE 9

Oups: Get meat (keep to the far left) and walk back to the gate.

SCENE 10

Oups: Use meat on the hole in the tree.
Ig: Cast spell on moving leaves and then stand on the edge of the branch.
As: Stand on the big rock and pull the branch.
Ig: Cast spell on the cork.
Oups: Get the cork and put it in the top middle hole. Get windsock and stand near hole on the far right.
As: Punch the hole with the bird.
Oups: Use the windsock to catch the bird.



● **Proposed Planet One** is due to be completed by 1997. Running straight past it is the proposed spaceway, along which you can see the proposed shops. The location of the proposed accident spot has yet to be decided.



● "So," said Bub, in a carrying-on-from-last-issue's-caption sort of way, "er... I've forgotten." "Pass us the lard," chimed Bob wittily.

PARASOL STARS

OCEAN

Get the gold rods and yellow lamps – the gold rods make every creature killed turn into a magic coin, while the yellow lamps turn the secret food into magic coins.

A special lamp with a coin on the side of it also makes secret food into magic coins.

SCENE 11

Oups: Free the bird near the animal.
Ig: Cast spell on the animal.
As: Punch small door on left.

SCENE 12

Oups: Tickle skeleton's foot with feather. Stand underneath the picture and give cup and ball to skeleton. Give the key to the creature in the cage.
Ig: Cast spell on the feather.
Oups: Get fly swatter and swat the fly.
Ig: Cast spell on the dead fly.
Oups: Throw the dart at the picture. Get doll and use the elixir.

SCENE 13

Ig: Cast spell on the coin at root of tree.
Oups: Blow bird call while standing in the nest and then move away from the nest.
As: Wait until the bird moves away and then punch the bouncing egg.
Ig: Cast spell on the bouncing egg and then cast spell on the horn.
Oups: Use the elixir to get past the horn. Drop the carrot near the hole.
Ig: Cast spell on the mole.
As: Go past horn when the woman appears.

SCENE 14

Ig: Cast spell on flat stone on the floor.
Oups: Climb up the ladder and use the stick on the small hole at the far right on the large rock. Use the watering can on the planets that are second and third from the right and the one that's furthest left.
Ig: Cast spell on the carrots.
As: Punch the key.
Oups: Use the key on the carrot with the keyhole.

SCENE 15

As: Punch the cannon and then the cannonballs.
Oups: Get the matches and put them near the cannon. Get the cannonball and put it into the cannon.
As: Punch cannon.
Oups: Use matches to light the cannon and then light the stove near where the carrot lands. Put carrot in the cannon and light it. Repeat this to get another carrot.
Ig: Cast spell on the carrot.
Oups: Use ear horn on the old man in the chair. Hit the gong with the mallet. Get pendulum.

SCENE 16

Oups: Get small stone on the left and put it on the cross.
Ig: Cast spell on the stone and then climb the ladder. Cast spell on the tree on the far left.
As: Punch pick.
Oups: Strike floor with buddha's head five times (on line).

SCENE 17

As: Punch stack of logs.
Oups: Use log on trap.
Ig: Cast spell on the log and then cast spell on the bag near the steps.
Oups: Use bag of seeds on top level. When foot comes, use the deodorant. Put foot on top of steps where the money originally was. When the foot is burnt, pick it up and use it on the bridge trap. Put sword on top of the steps and pick it up when it's lit.

SCENE 18

Oups: Use the swords on the buddha's medallion. Climb into his left hand and

STARRAY

LOGOTRON

Type **AL YANKOVIC**, then <F5> gives infinite shield and <F6> skips the attack wave.

THUNDER BLADE

K I X X

Wait for the high score table to vanish, then when you see the helicopter, type **CRASH** and press <Undo> to move to the next screen.

TITUS THE FOX

TITUS

Charles Pinkowski of **Lanarkshire** in Scotland has sent in the first eight level codes:

1	2625
2	8455
3	2974
4	4916
5	1933
6	0738
7	2237
8	5648

then climb off. Put the key in his right ear and drop the sword under the medallion (on the floor).
ALL: Climb onto the buddha's left hand.

SCENE 19

Oups: Put all three books on the table for the gog. Use false nose while standing on the table.

SCENE 20

Ig: Cast spell on the shield.
As: Punch the lever.
Ig: Cast spell on the cork.
Oups: Use witchcraft on goblin. Get the bowl and put it under the goblin's right eye. Use witchcraft again. Get bait from the tower (top left). Put bait where the bowl used to be. Use bowl on creature and get the catapult.

SCENE 21

Oups: Use catapult on bunch of bananas.
As: Punch lever.
ALL: Climb on back of shark.

SCENE 22

Ig: Cast spell on the flat stone near the skeleton's foot.
As: Stand at end of wing.
Oups: Put empty back on the floor above the shark. Use catapult on the Wizard.
Ig: Cast spell on the creature.
As: Punch creature.
Oups: Use catapult on the web strand and stand near the bag.
Ig: Cast spell on the creature.
Oups: Get the bag and use it on the pot.

"Tickle skeleton's foot with feather?" And they say ST games are stupid.

THE SECRET OF MONKEY ISLAND

LUCASFILM

THOSE WITTY INSULTS AND COMEBACKS

When you get an insult you have not heard before, it is added to your list of insults – and the same thing with comebacks. Here is a list of insults and comebacks to help you when you are fighting

INSULTS COMEBACKS

This is the end for you, you gutter-crawling curl
And I've got a little tip for you. Get the point?

Soon you'll be wearing my sword like shish kebab!
First you'd better stop waving it like a feather-duster.

My handkerchief will wipe up your blood!
So you got that job as janitor, after all.

People fall at my feet when they see me coming.
Even before they smell your breath?

I once owned a dog that was smarter than you.
He must have taught you everything you know.

You make me want to puke.
You make me think somebody already did.

Nobody's ever drawn blood from me and nobody will.
You run that fast?

You fight like a dairy farmer.
How appropriate. You fight like a cow.

I got this scar on my face during a mighty struggle!
I hope now you've learned to stop picking your nose.

Have you stopped wearing diapers yet?
Why? Did you want to borrow one?

I've heard you were a contemptible sneak.
Too bad no one's ever heard of you at all.

You're no match for my brains you poor fool.
I'd be in real trouble if you ever used them.

You have the manners of a beggar.
I wanted to make sure you'd feel comfortable with me.

I'm not going to take your insolence sitting down!
Your haemorrhoids are flaring up again, eh?

There are no words for how disgusting you are.
Yes, there are. You just never learned them.

I've spoken with apes more polite than you.
I'm glad to hear you attended your family reunion.

We've always resisted giving you the complete solution to this fabulous game in Gamebusters because it's a real pleasure to play without cheating. But we've had so many enquiries about it, we've decided to give in to public pressure and proudly present the entire (sketchy) solution, which happens to be from Jaz Pearson of Lancs. Take it all away, Jaz

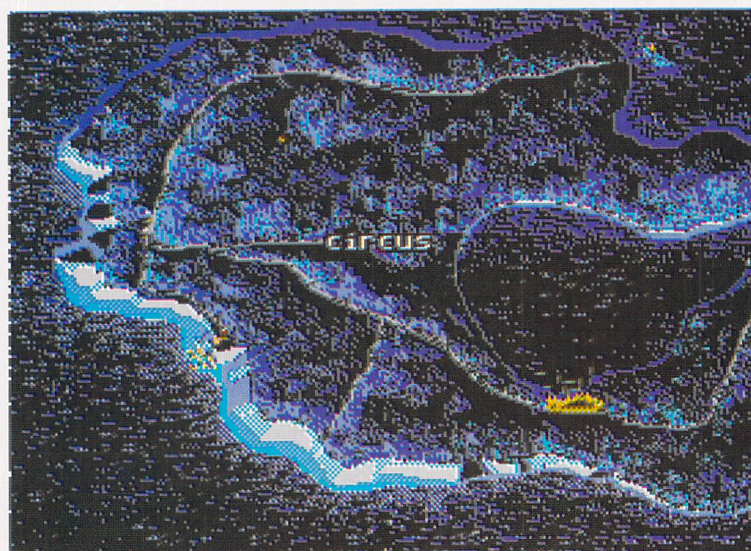
Go to Scumm Bar and talk to the important-looking pirates. Go into the kitchen (when the cook has gone in the main bar) and get a pot and some meat. Go on to the dock and walk to the bottom right hand side to pop the bird in the air. Do this about four times and get the fish. Next, go to the circus in the clearing and talk to the Fettucini Brothers. When they ask for a helmet, give them the pot. When you get the money, buy the map from the Melée Citizen. Go into the Voodoo shop and get the chicken, buy the shovel and sword from the storekeeper. Go to see the prisoner, then buy some breath mints from the storekeeper to give to the prisoner. Go to Captain Smirk's house on the south side of the island and open his door. Say to him that you want to be the best sword fighter. When he says that you haven't got what it takes, say you have got what it takes

(three times). When he tells you to practise some insults, go on the path and stop at the first junction from the look out point – this is a good place to meet pirates. When they stop, fight with them.

If you beat her she gives you a T-shirt, but if you don't you have to keep practising until you can beat her. Go to the forest and up, and get the yellow petal, use the petal with the meat. Go to the Governor's Mansion and give the meat to the dogs – they fall asleep enabling you to pass. Open the door and go inside, then open the door on the left and watch the show. Go and see Otis (the prisoner) and give him the gopher repellent, get the cake and open it, you find a file, go back to the Governor's Mansion and go through the hole in the wall (watch the show). When you get underwater, pick up the idol enabling you to move. After that, go to the important-looking pirates and give them the idol.

Now go to the forest and use your map – it isn't for dancing – to find your way to the treasure, but if you're getting tired of looking at your map, here is the way: walk to the back path, left, right, left, right, back, right, left, back and then walk to the right, where you find the "X." Then use the

● Ed took a deep breath. He knew he had a daunting task before him: to fill up an enormous caption space with not much more more to go on than a rather uninspiring picture of three ghosts from *The Secret of Monkey Island* and an odd picture of an island with a circus on it. How should he go about it? Should he do the amazing "limp lampshade" gag? Should he recount the amusing story of the two businessmen and the Vileda cloth? Heck, that's the easy way out. Jaw set in a determined manner, Ed boldly decided to go for the man-trapped-in-lift gag... There's this man trapped in a lift, see. Eventually manages to open up the door slightly. Peering out, he's startled to see two penguins staring back at him. "Here," says one of them, "you look just like Lee Majors." And the man says, "Yes, but look at my..."



shovel with X to dig it up. Go to show the important-looking pirates, but on the way, you're told that the Governor has been kidnapped. Go to the Sword Master's and tell her that the Governor has been kidnapped, she joins your crew. Next go to the island using the rubber chicken and enter the house. Tell Meathook that the Governor has been kidnapped and you are going to be Captain. Then open the hatch and taunt the parrot.

Next go to the bar and get all the mugs. Go into the kitchen and use a mug with the barrel. Go to the prison, on the way keep changing the mugs, then use the drink on lock to release Otis.

Next go to the lights and ask Stan for credit, go to the storekeeper and ask him for a credit – tell him you have a job. He doesn't believe you, so watch him dial the lock making sure you pay close attention – write it down. Now tell him you want to see the Sword Master, he leaves so you can open the safe, use the same combination. Now go back to Stan's and tell him you want a cheap one.

Ask Stan how much he wants it for and say: "Forget it, I guess you're right," and offer him 1,000 pieces of eight. Ask how much he wants it and say: "Forget it." Go back again. Do this a few times until he wants 6,900 pieces of eight to which you should offer 5,000 pieces of eight. Now go down to the deck where you meet your ship and crew. On the ship climb the mast and get the Jolly Roger. Go back down, go through the hatch and into the kitchen. Open the cupboard and get a packet of cereal, open it, examine prize, get the pot. Go back to where you started from and use the key in the cabinet. Get the chest, then open it. Get feather pen and ink. Go to the cargo and open the chest to get some wine. Get rope and open the kegs. Go to the galley and put cinnamon sticks in the pot, along with breath mints, Jolly Roger, ink, fine wine, chicken, gunpowder and cereal.

Now use Stan's cards in a red hot fire, get some gunpowder in the cargo, now go to the deck and use gunpowder in the can-



● The Men of Low Moral Fiber – sorry, Fibre, this is Britain after all – are appearing in panto. The rat can be seen in a trap near you from Friday.

non nozzle, use the rope on the cannon, use the helmet and the rest happens automatically. On the island, go to the fort on the volcano and push the cannon. Get gunpowder and the spyglass, now go to the dam and use gunpowder in the dam, then open the spyglass, use lens with sun. Now take rope from the man.

Go back to the dam and climb the mountain using the footholds. Pull or push primitive art until it faces you, now climb even higher and push the rock – it hits the banana tree. Go to the crack and use rope with tree branch, then use the other rope on the tree stump. Get the oars, then go back to the beach and get the bananas. Use the oars with the boat and row right the way around the island until you come to the top on the right. Land on the beach. Go to Native's village, take bananas, then leave.

The natives catch you. Get the skull on the floor and push the board loose. Climb through. Leave and go back to where you started from. Give the bananas to the monkey and go to the clearing which leads to the Monkey Head and pull the totem pole's nose, the monkey copies you enabling you to go through, get the wimpy little idol and go back to the Native's village. Go back to where you found the bananas and leave, then give the wimpy little idol to the natives. Go to the hut and get the banana picker, give it to Toothrot and he gives you

the key. Go to the monkey head and use key in ear. Enter the mouth and search around. Go back to the natives and give them the leaflet titled How To Get A Head In Navigation. They give you a head, so go back to the monkey head and enter it.

Use the head and follow its nose all the time. When you see the ship, ask the head for the necklace five times. Now use the necklace. Enter the ship and the ghosts can't see you. Enter the room where Lechuck is and use the magnetic compass with the key (not the monkey head key). Go down the hatch, find the chickens and pick them up to get a feather. Now use the feather on the sleeping ghost (do this twice) and get beer. Now open hatch with the key and go down and use beer in the dish. Get some grease.

Go back to the deck and use grease on squeaky door. Now open door and go through to get some tools. Go back to the glowing box and use the tools on it to get the root. Go back to the natives and give them the root. Talk to monkey and take the magic seltzer bottle, then go back to the ghost ship. Talk to the ghost there and wait for your crew. Back at Melée use the seltzer bottle on

MORE OF THOSE WITTY INSULTS AND COMEBACKS

When the pirate says you're good enough to fight the Sword Master, go to the storekeepers and ask about the Sword Master. Then follow him, this leads you to the Sword Master. When you fight, you notice her insults are different, so here are the Swords Master's insults to help you

INSULTS COMEBACKS

I've got a long, sharp lesson for you to learn today.

And I've got a tip for you. Get the point?

My tongue is sharper than any sword.

First you'd better stop waving it like a feather-duster.

My name is feared in every dirty corner of this island!

So you got that job as janitor after all.

My wisest enemies run away at the first sight of me!

Even before they smell your breath?

Only once have I met such a coward.

He must have taught you everything you know.

If your brother's like you, better to marry a pig.

You make me think somebody already has.

No one will ever catch me fighting as badly as you do.

You run that fast?

I will milk every drop of blood from your body.

How appropriate. You fight like a cow.

My last fight ended with my hands covered with blood.

I hope now you've learned to stop picking your nose.

I hope you have a boat ready for a quick escape.

Why? Did you want to borrow one?

My sword is famous all over the Caribbean! To bad no one's ever heard of you at all.

I've got the courage and skill of a master swordsman!

I'd be in real trouble if you ever used them.

Every word you say to me is stupid.

I wanted to make sure you'd feel comfortable with me.

You are a pain in the backside, sir!

Your haemorrhoids are flaring up again, eh?

There are no clever moves that can help you now.

Yes, there are. You just never learned them

Now I know what filth and stupidity really are.

I'm glad to hear you attended your family reunion.

I usually see people like you passed-out on tavern floors.

Even before they smell your breath?

ghost, go to the church but on the way you are stopped again, so use the seltzer bottle on him and then go to the church. Inside the church say: "Stop the wedding," and talk to Lechuck about anything, then use the seltzer bottle on him – that doesn't

work and you get bashed around the island. When you land at Stans, get rootbeer and use it on Lechuck. Now say anything to the Governor. Brilliant ending, isn't it? Now write to Lucasfilm and tell them to convert Monkey Island 2 to the ST.



Guybrush Threepwood, man among men, embarks on the long and arduous journey to becoming a full-blown pirate...



...but fails in the first round for spelling "haemorrhoids" wrongly. (Hey! Another great gag!) Meanwhile, at the fight...



...Guybrush goes for the classic drunken riposte. The pirate, still not quite sure what "haemorrhoids" are, hesitates for a moment...



...and is lost. That's all from Sword-fighting with Threepwood this month. Join us next month, when we'll be in Tunisia.

ETHOS LYSIL MAGRANAS NI LLUF...

Back in issue 36, that seriously deranged, but pretty dude-like really, Ricketts bloke decided to ask for some silly anagrams of the words Railroad Tycoon, and we're slightly less than ecstatic to announce that we have an official winner.

Now, one or two of you tried a spot of blackmail (which never works), a bit of lewdness (which isn't big or clever) and even one or two references to dodgy substances that were grammati-

cally contained within the phrase. But, as Jim Bowen always says: "Look what you could have won," which, in this case, turned out to be one copy of both the Railroad Tycoon and Formula One Grand Prix games, courtesy of Micro-Prose.

Firstly, one or two mentions to those unlucky losers... We liked "Loony Atari dorc" from a chap called **Tudor Boddam-Whetham** of **Gloucestershire**. Sticking with the subject of the

intellectually challenged, "Loony croat raid" was a topical offering from **Angel-Jose Solis** of **Austria**, no less. Another apt and vaguely amusing one was "Coo, lordy a train" from the warped imagination of **M R Abbott** of **Middlesex**. We even considered "Cry 'O drat' in a loo," which belched forth from the rather dubious cognitive processes of **Mark Lenton** of **Lincolnshire**. But – for sheer, sheer controversy – the winner must be **Rita Solomon** of **Chiswick**,

London, with her pretty darned unbeatable "Do a Tory rail con" and so this lucky individual can expect copies of *Railroad Tycoon* and *Formula One Grand Prix* to be winging their way in the pretty post soon(ish). So, hale and hearty congratulations to Rita, and lily-livered commiserations to the runners-up – that's the way it goes in the crazy, mixed-up world of having nothing better to do than sit around jumbling the letters of a phrase around...

BITS OF ALL SORTS, REALLY

Charles Firth of Surrey has sent in books and books of cheats on everything under the sun. These are the juiciest bits. (It takes a lot of diligence to go through all the back issues of *ST FORMAT* and nick all these cheats, y'know. Oops, what have I said?)

ARKANOID

OCEAN

Play a two player game and let player two get 20,000 points before player one. Then, every block that player two hits gives you an extra life. Also, you can press <F3> or <F4> to see a new screen.

Or try this: pause and type **DSICAST SPELL ON THE**. The game restarts. Get the cylinder which is released and then the following keys for groovy effects:

<L> for lasers
<F> to go to the final screen
<C> to catch.

ARKANOID 2

OCEAN

With this game the cheat is on the title screen, type **MAGENTA**, and then <S> to skip levels.

BOMBUZAL

MIRRORSOFT

The level codes:

0 BOMB	8 RACE
16 RATT	24 LISA
28 SINK	32 DAVE
36 BIKE	40 IRON
44 BIRD	48 LEAD
52 TAPE	56 WEED
60 VASE	64 RING
68 PILL	72 GIRL
76 SPOT	80 GOLD
84 PALM	88 OPAL
92 LOCK	96 SONG
100 SAFE	104 FIRE
108 WORM	112 LAMP
120 TREE	148 MYTH

CHUBBY GRISTLE

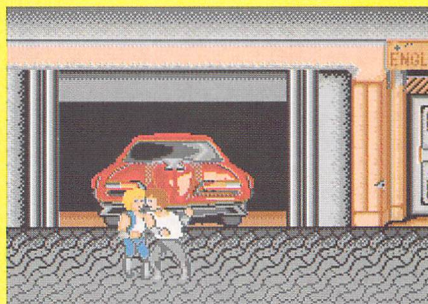
TYNESOFT

For infinite lives, type in **BUUURRP** on the title screen.

DOUBLE DRAGON

16 BLITZ PLUS

On the high score table, in *Double Dragon*, enter **NEIL HARDING** to hear what we think of Amigas!



FISH!

VIRGIN

If you have a "cracking" problem, why don't you find a dry route in the ruined abbey? In order to get to the top of the archway, you need to get hold of the paw. Be careful with the torch or else the beam alerts the hippies. Turn it off because the light from their fire should be enough for you to see by.

Examine the debris in the antechamber. Move the sarcophagus lid which then reveals a passageway to the crypt. When you examine the altar, you find a gargoyle-sized hole in its surround. Take the ceremonial cord to get the gargoyle, which falls down. This alerts the hippies, so pick up the gargoyle and split from the crypt. You can plug the doorway with the lid as you go through the antechamber. This delays them for a while, so nip down to the altar and insert the gargoyle into the hole.

● "Did you call my car a puff?"
"Er, yes, actually I did." "Oh."

CALIFORNIA GAMES

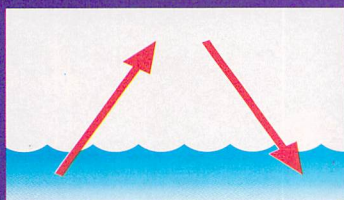
KIXX

To get 10.00 on the surfing, do this: when you leave the wave, you must come down at the same angle to avoid falling off. Have a look at the diagrams on the right for some examples of techniques you can use.

After you've done this a few times, just go down a bit, hold left and watch him go round and round and round until the time's up!



OR



OR



● It's very easy to knock, isn't it? It's too simple to say that Californians are empty-headed, brainless and stupid; ruled by five-minute fashions, style over content, and ridiculously shallow emotions? It's so easy. Easy, and true too.



● "Hollywood" was a spelling mistake. It was supposed to be Hollyrood, like in Scotland, but the Scottish settlers were drunk and thought "Hollywood" sounded sillier. True story, that.

RICOH PCL5 LASER PRINTER

Ricoh UK Ltd is part of the worldwide Ricoh Group of companies, originally established in Japan, in 1936. With a turnover of over \$5 billion and 37,000 employees, Ricoh has been producing computers and peripherals since 1971 and are the world's second largest manufacturer of Laser Printer engines. Ricoh have employed their expertise to produce a 'first' in laser printers for the world market, the LP1200 with FLASH ROM.

Fully HP LaserJet III™ compatible, the new LP1200 employs industry proven laser technology. Unlike LED page printers, which use light emitting diodes, the LP1200's laser lightsource, focussed by high quality lenses, is able to produce the most accurate and intense printed images. It has 2Mb of RAM built-in and requires no additional RAM to print a full A4 page of graphics at 300dpi. Its fast, efficient processor and engine, together with a straight paper path design, allows printing at a full 6 pages per minute. Unlike its competitors, this advanced laser engine enables the LP1200 to address a range of print resolutions up to 400dpi. A new driver will soon enable the Ricoh LP1200 to print at 400dpi from Windows 3 (2Mb RAM upgrade required).

Again, unlike the competition, the LP1200 includes a powerful document description language as standard. This language, 'LAYOUT', offers unique opportunities to develop custom-made printing systems. Forms and document templates can be designed and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

DUAL BIN
OPTION SHOWN

The Ricoh LP1200 is a genuine laser printer and not an LED printer. Make sure you check out the competition!

See how the Ricoh LP1200 compares to its Laser Printer Competitors

FEATURES	EPSON EPL4100	HP LJ4100	MANNESSMAN TALLY 904+	RICOH LP1200
Average Street Price (*expected)	£569	£699	£699*	£699
Official RRP	£945	£1,179	£1,099	£1,195
Maximum resolution in dots per inch	300x300	300x300	300x300	400x400
Windows 3 Driver @ 400 dpi (July)	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	6ppm
Straight Paper Path	YES	-	-	YES
PCL 5 Printer Command Language	-	YES	YES	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES
Full A4/300 dpi graphics with standard RAM	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	60 secs	45 secs
First Page of Text Output	<20 secs	<40 secs	34 secs	<15 secs
Document Description Language included	-	-	-	YES
Flash ROM	-	-	-	YES
Upgradable Firmware	-	-	-	YES
IC Card Slot	YES	-	-	YES
Scalable Resident Fonts - in HP LJ III Emulation	-	8	8	8
Resident Bit-Mapped Fonts	11	14	14	14
AGFA Intellifont Scalable Font Technology	-	YES	-	YES
HP LaserJet III Emulation Included	-	YES	YES	YES
EPSON FX Emulation Included	YES	-	YES	YES
IBM ProPrinter Emulation Included	-	-	YES	YES
Standard Tray Capacity	100	70	100	100
Protective cover on standard tray	YES	-	YES	YES
Cost per copy*	1.65p	2.00p	1.71p	1.65p
Min-Max Paper Weight in gsm	60-157	60-105	60-120	60-157
Able to print on OHP Film	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	-	-	YES
Auto Sensing on Parallel and Serial ports	YES	-	-	YES
Standby - Noise Level	<40dB	31.7dB	<35dB	<38dB
Printing - Noise Level	<50dB	43.3dB	<46dB	<48dB

*Cost per copy as quoted by manufacturers - 2/4/92 E & OE

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400 dpi 2Mb RAM 6 PPM
FLASH ROM UPGRADABLE!

**COMPUTER SHOPPER
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REDUCED TO

EMLYN HUGHES INTERNATIONAL SOCCER

Touchdown – £9.99



● Despite an extremely funny act, the comedy duo of Koopsan and Hardy never really got anywhere. Then Koopsan changed his name to Stan Laurel and the rest, as they say, is history.



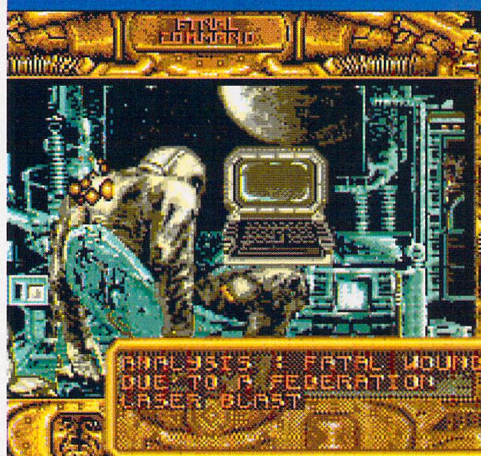
Once he's scrawled his moniker across the box and donated a horribly posed photograph, the manic sports personality, Emlyn Hughes, plays no further part in this game. Instead you're treated to a football-cum-management bit of entertainment that's simply brimming with menus and options. If you want a straightforward game, you can give every player equal skills, but, for the more ambitious manager, there's plenty of scope for strategy. The football game itself is also pretty nifty – you can kick in up to five directions, with three shot heights and a nifty back-heel option. With a bit of practice, you can jink around the screen with the best of 'em.

VERDICT: This is proof positive that soccer games can be fun. *Emlyn* succeeds at the not inconsiderable task of being fun to play as both a management sim and a dash-about arcade game. Because you can control both aspects of the game, you develop a real affinity with all the members of your team. It can be quite a traumatic experience when you have to take old Swonnicker out of goal because he's died, or something equally sad. Involving, excellent fun.

STF Rating: 90%

FINAL COMMAND

Action Sixteen – £7.99



● But ask yourself this question: how many laser blasts were fired? Are you sure it was the Federation that was responsible? And just who was that shadowy figure on the grassy knoll anyway?

There's something strange happening on Ipsos 3. Locals on neighbouring planets have begun to whisper loudly to strangers about whatever it is that's going on, raising their eyebrows melodramatically and affecting unconvincing West Country accents. Things *must* be bad. As Agent YG30 – Y to your friends – you've been sent to investigate. You start your mission aboard the military starcruiser Centaure, where, unsurprisingly, the entire crew has been suspiciously murdered. Can you solve the mystery of Ipsos 3? Can you retrieve the all-important information about the new teleportation system and safeguard the Federation for all time? Or what?

VERDICT: As befits a French game, it's pretty much up to you to discover how you've actually got to play it. We're not giving anything away by saying it's a "hot-spot" graphic adventure kind of thang, where you sweep the mouse about the screen and try to find the active pixel that does interesting things when you click on it. And – spook! – it's very, very good. The graphics, sound and spelling are, erm, typically French, and the complex plot promises plenty of brain-cell activity. It's something of an acquired taste, but immensely enjoyable.

STF Rating: 78%

STEG

Code Masters – £7.99



● Steg had trained his children well. They harmonised perfectly, and Jasper did a fair impression of Harry Secombe shaving. Now, at last, they were ready for the vaudeville circuit of Newcastle town.

Steg is a slug with a porpoise. And a purpose. The porpoise is a stuffed toy called Belinda that he keeps at home in a cupboard for those emotional moments. Steg's purpose is to feed a clutch of sluglets. To keep this happy band from snuffing it, he has to transport some tasty worms up through a network of vertically-scrolling tunnels to the babies' nest. Cursed as Steg is with a complete lack of useful appendages, he employs that well-known sluggy trait of blowing bubbles. The bubbles trap the worms, which are then sent floating to their doom. This is easy-peasy to start with, but on later levels you have to take things in stages. Power icons litter the floors, so you get such strange benefits as bionic legs and an extremely handy jet pack to aid you in your task.

VERDICT: A refreshingly bizarre game with some splendidly moist graphics, *Steg* is at first just a case of learning where to stand to blow those bubbles, but as you progress through the ten levels you find narrow tunnels and spiky ceilings conspiring against you. Very playable, but with little lasting appeal – you can complete the first three levels in an hour – it's a pleasant enough way to while away an unpleasant rainy afternoon.

STF Rating: 75%

CLEAR

Budgies, eh? They're small pretty coloured birds that bang their heads against bells and say "cheep," all the time, aren't they? Jon Pillar gets completely the wrong idea (again), but recovers in time to look at these – er, mynahs

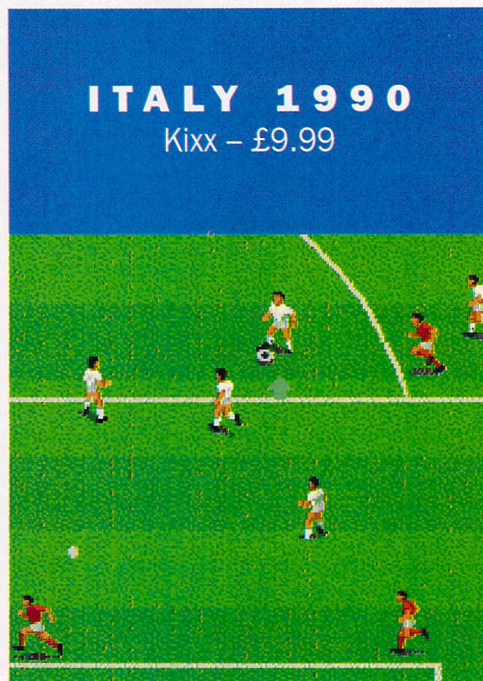


● When he's faced with this type of situation, the space traveller would do very well to remember the old Gilgafraxian proverb, "Spoo nicky ellnish forble-farb." Then run away. Fast.

It's lone-hero-lost-in-space time again, with your somewhat inept pilot managing to run out of fuel in the middle of nowhere. Luckily he stumbles across the trouble-stricken Regal Fleet and determines to get home in that. Naturally, you have to pass through 19 other ships to get to the BSS Jane Seymour, braving escaped aliens, space-crazy crew members and unstable nuclear reactors along the way. Ho hum. On each ship, your task is to get the systems up to 80% efficiency by lugging coolant about the place in homemade containers. The life of a spaceways nomad, eh? Don'tcha just love it?

VERDICT: A fair 3D adventure hampered by an unnecessarily long-winded control system and too much loading and disk-swapping. The graphics are fine while the plot is jolly meaty. 20 levels and some mean puzzles promise plenty of lasting appeal, but there's a lot of wandering through empty corridors between the good bits. OK if you've got lots of time and patience.

Sci-fi Artistic Licence Factor: 74%
STF Rating: 70%



● And as the team wondered silently who it was who had stolen the juicy half-time oranges, the finger of God, in the shape of a luminous arrow, pointed sternly to the grinning Niblick.

One of, erm, two or three football games that tried to cash in on the World Cup – though whether this is the Official Tie-In or one of the Blatant Rip-Offs is hard to say, *Italy 1990* is a straightforward hack-the-ball around-the-scrolling-pitch affair. Playing the team of your choice – yes, now Uncle Dennis can fulfil that lifelong dream of captaining the United Arab Emirates – you have to, well, take your team through the tournament, beat your opponents and win the cup. Basically. As usual, you control (a) the player nearest the ball and (b) the ball itself by holding down <Fire> to build up kicking power. Some stuff about player strength and team formation tops off the trifle, so quick passing is the order of the day.

VERDICT: *Kick Off* still has a lot to answer for. *Italy 1990* is cursed with what appears to be a pitch over 700 feet long, with the players belting up and down at thigh-defying speeds. Any thought of tactical play vaporises as soon as you start the game – you rush about, thump the ball in a random direction and hope scrolling is going to reveal one of your players in a handy position. It's not much fun, even with two players, and there are at least 16 identical footy games that are substantially better than this sorry affair.

Kick Off Rip-off Rating: 82%
STF Rating: 52%



● Oh, what a silly typographical error. They've accidentally printed "Spike" instead of "Hagar." And they've misspelt Transylvania as well. Now don't you think that's quaint?

Shunned by the others for not being called something sensible like Wilfred the Ludicrously Hairly, but too proud to change his name by deed-poll, Spike is a Viking without friends. But, as luck would have it, the rest of his advance scouting party has been imprisoned by some smug villagers. Cunningly, Spike avoids capture by lying in a ditch six miles away, the result of a collision with a distraught leper. However, Spike soon realises that the fates have given him a chance to prove his worth. In a typically winsome arcade-adventure, our hero has to make his way through the village, freeing his comrades by solving puzzles of the "certain object at certain location removes certain barrier" variety.

VERDICT: Sadly, it's Dizzy, but worse. The graphics are dreadful, with scribbled sprites and truly embarrassing backdrops, while the awful music serves to terrify passing cats. There's a sort of pseudo-3D perspective to the screens which makes accurate movement stupidly difficult. Finally, silly puzzles and weak jokes spoil what little atmosphere the game had to start with. It's too twee for the teens, too fiddly for the teenies, and the wholly unremarkable gameplay spoils it for everyone else. Ghostly.

Cringe Rating: 85%
STF Rating: 49%

LET'S TAKE IT TO THEM...

In which the self-proclaimed New Age stylist Andy Hutchinson checks out five games in which maddened psychotic nutters attempt to search out far away planets with exotic life on them. And, ermm, destroy them. The envelope please, Victoria

THE GAME

THE HOT PLOT

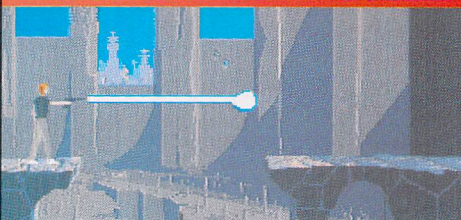
THE FLIES IN THE OINTMENT

HAPPY ENDING?

THE CARING, SHARING TEST:

The Issue: **\$7F 33**
The Score: **93%**

ANOTHER WORLD



You've mistakenly been been zapped to a very weird and utterly hostile world in your capacity as a physicist. In this world all you see on the TV are old repeats of *The Flashing Blade* and all you see on the streets are the locals who bear an incredible resemblance to the hoards of Spanish school children who visit Britain during the summer wearing identical foul rucksacks and permagaze smirks.

For starters, there's this extremely large black beastie with fangs and a copy of *The Watch Tower* in his back pocket. There are also some killer rocks, the odd swiftly flowing river and a vehicle that's terribly hard to control.

Mais d'accord. Our hero gets home in one piece and has a relaxing hot bath with some Woodland Glade Badedas foaming crystals. However, he then discovers that he missed out on an opportunity to enter the Readers Digest Free Prize draw, gets depressed about life in general and heads off to Palma to find himself. He fails miserably.

Again, it's a test of survival so the scientist can hardly be blamed for shooting up the other-worldly landscape a bit. He doesn't use excessive force though, so it's alright.

The Issue: **\$7F 37**
The Score: **91%**

EPIC



The mighty solar orb Maganellic which heats westerly facing walls on Federation planets is about to pop its clogs, supernova style. So, the people of the Federation decide to head for the planet Ulysees Seven where they can rebuild their rock-eries and creeping vine glasshouses.

The Rexxons. You see, you've got to waddle through their space and they hate your guts. Consequently, although you mean them no harm, you're going to have to shoot down hundreds of the blighters before you can unload the dry stone wall from the cargo hold on Ulysees Seven.

Absolutely. Your happy band of space colonists make it to the new planet and spread out in a vaguely settlement like fashion before the whole area is covered in house podules each with a relaxing pond area.

Thumbs up, oh yes. Loads of scrapping, but it's OK because you only return fire – after all, they started it. Make mine a dandelion poultice, please.

The Issue: **\$7F 18**
The Score: **90%**

SUPREMACY



You control a single planet overlooking a back alley with some bins in it. You'd like more planets, preferably with better vistas, so you decide to steal a couple of those rather large lumps of rock. Before you know what's happening, you've turned into an inter-galactic ruler with a clutch of solar systems under your control – but you still can't find that decent view.

Well, the original inhabitants of the planets you're duffing up aren't too chuffed, particularly when they learn that you're only doing it to get somewhere good to build a gazebo on. Wotoks, Smines, Krarts and Rorns have all got a tasty line in nuclear strength arms and are keen on wafting them under your nostrils if you try and pinch their allotments.

Not really. It's a shame to say it, but death is the only way ahead in this game. These are, after all, the '90s and we can't have all you young men spreading testosterone over the Milky Way without so much as a rhododendron along the chancery wall.

Blood lust and bullets aplenty, but very lacking on the lentil front. This one gets the big thumbs down.

The Issue: **\$7F 20**
The Score: **86%**

GAZZA 2



The rotund geordie football exterminator has invaded an Italian football team in the quaint village of Lazio. His mission is to infiltrate the local amateur dramatics society who are posing as a football team and learn the ancient art of foppish-falling – the banished art of deceiving men in black. Once he's learnt the trade, he can move back to his home isle and throw himself, martyr-like, at goals up and down the country.

The great white knight Lineker has already departed for Japan to learn the inscrutable art of world domination through consumer goods. He is the only obstacle in Gazza's path. Well, that and a dodgy knee.

We all hope not. We're glad to be shot of him.

He shoots, he misses. Nope, nobody cares about football anymore. Rugby's the only sport worth bothering with. Viva Will Carling.

The Issue: **\$7F 32**
The Score: **83%**

DEUTEROS



Humankind has got bored with its advanced civilisation. You see, once we'd released ourselves from the slavery of everyday work, we realised we had nothing to moan about, so our whole reason for being was gone. Obviously, we all decided to go and search for, explore and exterminate a few worlds – just to make evenings at the pub a bit more fun, you understand.

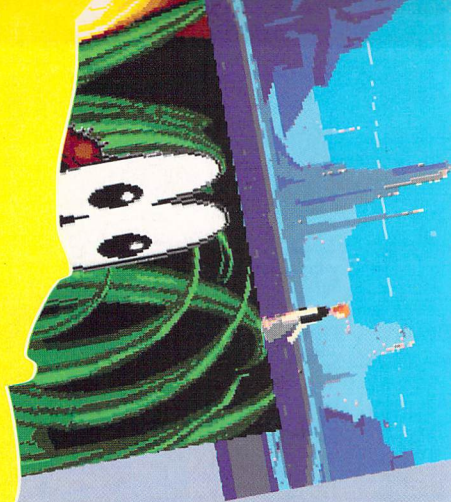
Lack of resources don't help when you're trying to build a ruddy great ore-carrying space-ship. Oh, and the worlds that you do seek out have some life on them – and these life-forms don't always like people trampling on their herbaceous borders. In other words, you have to kick a few alien craniums in.

Depends how low-down and dirty-dealing you are. Bad guys come first in this one. Destruction of extra-terrestrial life isn't funny, but if you want to win at *Deuteros* you have to trample, sack – and pillage a bit, too. And that's just before your tea.

Zilcho. Completely devoid of redeeming New Age claptrap. Oiks, primitives and Spanish school children are likely to love it. Caring, sharing humans of this decade should be shocked by its militant tendencies.

Other notable world trampling games include: *Thunderstrike*, *Venus the Fly Trap*, *Super Space Invaders*, *Exile*, *Z-Out*, *Zone Warriors*, *Frenetic*, *R-Type 2*, *Turrican 2*, *Space Crusade* and *Japan Summer Tour 1948-1992*.

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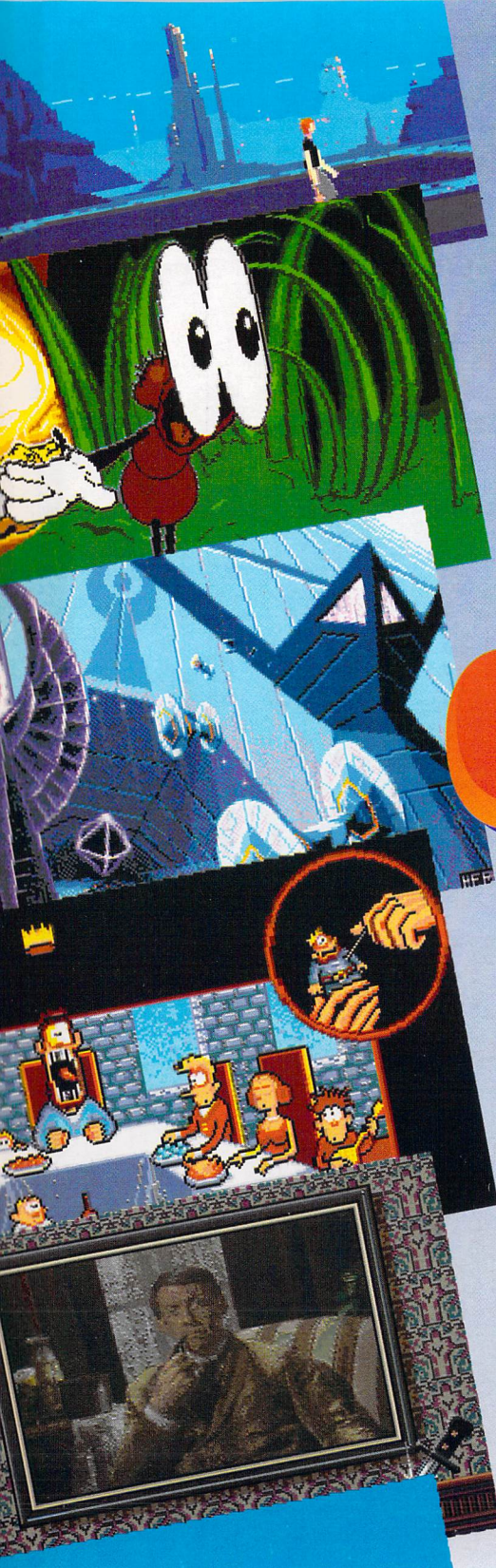
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Serious about MIDI

You've discovered how easy it is to make music with your ST. What's more, you're hooked, you like the sound of yourself and you're determined to take it further. Steve Wright shows you how to turn your hobby into your career and astound your friends with your mega-bass riffing technique

As an ST owner with some sequencing software and a multitimbral keyboard, you can begin to develop a musical career. You have all you need to create your own complete music compositions. However, you are probably also aware of the limitations of your setup. For a start, the sounds created by your equipment aren't always exactly as you'd like. You may also wish you

THE ST AT THE HEART OF A RECORDING STUDIO

The ST is now capable of controlling just about all recording studio equipment via MIDI

MOTHER KEYBOARD. This is the musician's main method of inputting music. In a professional setup, the mother keyboard is chosen for the response of the keyboard when played. As the main interface between musician and ST, it's got to feel right – that's why the mother keyboard is often an eight-octave electronic piano with 14 inch weighted wooden keys.

SOUND MODULES. This is where the sounds are made. Normally mounted in 19 inch racks, there are various types – multitimbral synthesizers, samplers, and modules which specialise in a single class of sounds such as piano or bass.

DRUM MACHINE. Although most drum sounds are available as samples, drum machines are still popular in studios because many musicians prefer the methods of drum pattern creation that drum machines can offer. Some have rubber pads which may be played like drums. The drum machine can therefore also function as an alternative to the mother keyboard as a way of entering MIDI information into a sequencer.

EFFECTS UNITS. These are the devices that create reverberation, echo, digital delay – and many other types of effect. MIDI control is usually achieved via Control Change and Program Change data which is sent from the sequencing

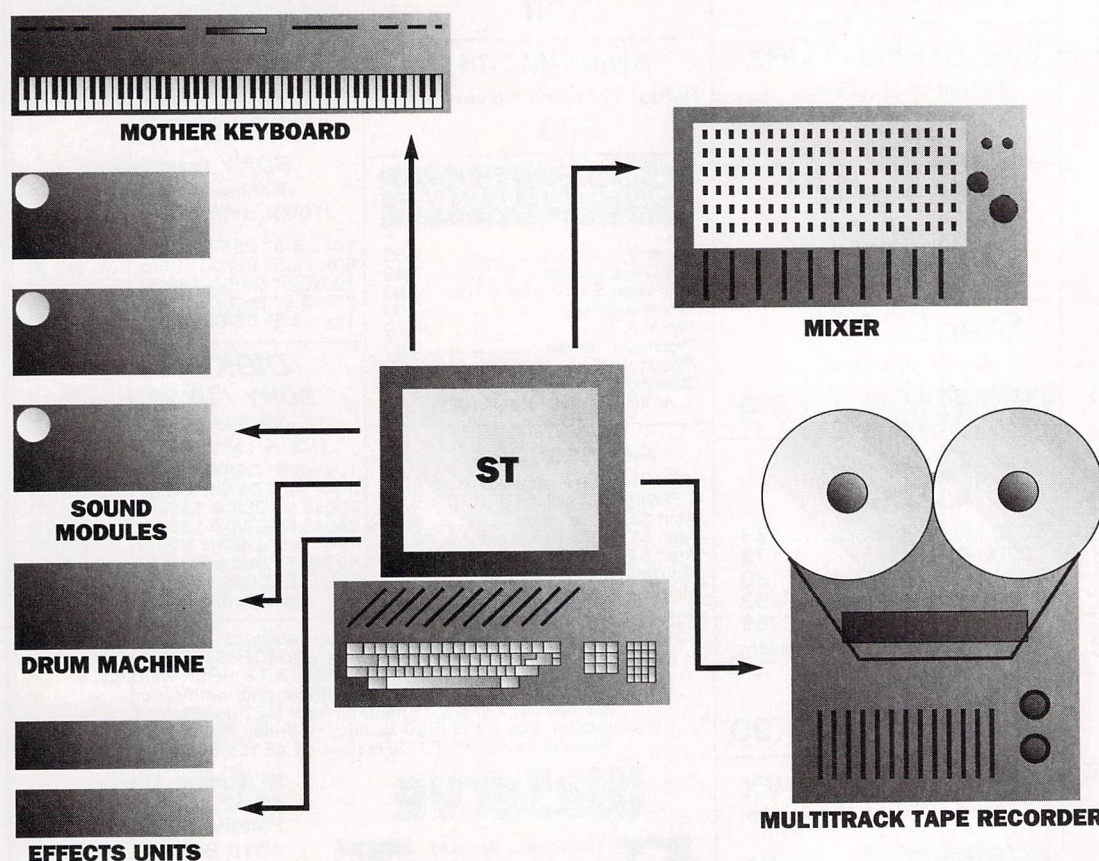
software. Each effects unit is set up to respond on a particular MIDI channel. A sequencer track can then be set aside for effects changes which are entered manually using built-in features of the software. Effects settings are thus changed automatically during playback, so that, for instance, a reverberation unit could be instructed to switch to a different type of reverberation at a particular point in the music.

MIXER. The mixer's main function is to enable the relative volumes of the different instruments and voices to be balanced – but they do a lot more than that. The mixer's controls enable sounds to be equalised and effected individually in order to achieve any desired blend.

Many newer mixers can be controlled via MIDI, so that by using a sequencer to send appropriate data at appropriate moments, real-time changes can be entirely automated by the ST.

MULTITRACK TAPE RECORDER. It is possible to work the actual transport controls of a tape recorder from within sequencing software – the ST actually tells the tape recorder what to do. The first multitrack to be able to do this was the Fostex R8, which used special MIDI System Exclusive codes specific to Fostex equipment. MIDI itself has recently had a new protocol added to it, known as MIDI Machine Control (MMC). MMC provides a standardised code which will encourage more software and hardware developers to implement MIDI control of machines.

COFFEE MACHINE. There is no MIDI-controlled coffee machine on the market as yet, but in theory there could be – we have the technology!



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had some way of recording vocals and acoustic instruments. If so, then you are ready to start looking at ways of getting more professional.

Before you think about upgrading your system, there's one way of making more of what you've already got – namely, booking a recording studio for a day. This is a strongly recommended first step – after all, you want to be absolutely sure that your music is really going to sound better with the benefits of a full production job – and besides, you can learn a lot from the experience.

DOWN AT THE STUDIO

Producing your own instrumental music at a recording studio is actually very easy, especially if you have an ST and some sequencing software – and it's really not that expensive. If you've never done it before,

start by looking for a small local studio which charges £10 to £15 per hour. Tell the engineer what you want to do before you book – that saves time later on.

Many recording studios are already equipped with an ST, so there's usually no reason to take your own. You probably don't even need to take your sequencing software either, because the music on your disk can be read by all professional music software packages, provided it has been saved in Standard MIDI File format. So, armed only with a floppy disk and a blank cassette tape, you can go into a studio and say to the engineer: "Here's the music, now find me some good sounds!". All you then have to do is listen hard, pick the best of what the studio can offer, and make some executive decisions about the mix. For music which is MIDI only – that is, without

vocals or non-MIDI instruments – you can expect to get three or four songs done in an eight-hour day.

That's the advantage of having your own ST and MIDI equipment – by the time you arrive at the studio, your songs are completely written and played. It means you can get more music finished in the available studio time because you've already done most of the work at home. Imagine if you had to do it all at the studio! Even if the studio only charges a few pounds per hour, think about how long you spent programming your music at home – then you can get some idea of how much money your ST has already saved you.

OK, you've had your first stint in a recording studio and you've come home with a cassette. It's wicked, it's kickin' and it's yours. You know how good you can sound and you've got an idea how produc-

PROFESSIONAL SEQUENCING SOFTWARE

Here are the top professional sequencing packages for the ST. Each has a unique design, but all are highly regarded. You should bear in mind that all these programs are fairly large, so consider investing in a memory upgrade, especially if you want to run editing software alongside your sequencer. Have a look at *STF 35* for details of how you can

upgrade – turn to page 40 if you don't have a copy of that issue. Incidentally, if you can't afford to leap straight to the top and you have a copy of *Sequencer One*, given away on Cover Disk 30, upgrading to *Sequencer One Plus* is a highly recommended compromise. You never know, within a year you could be collecting your very own BRITS award

STEINBERG: CUBASE

The best feature of *Cubase* is its fast and flexible method of song arrangement. Track names and track numbers are shown as a list on the left of the screen, and bar numbers are shown across the top. The screen can be zoomed and scrolled so that any part of the music can be seen at various magnifications. Chunks of recorded music are depicted as horizontal bars which you can cut, move, copy, paste and glue together with great speed and accuracy using simple mouse operations. The package includes MROS, Steinberg's multitasking operating system, which enables you to load other music software simultaneously. Cost: £575 from Evenlode Soundworks ☎ 0993 898484.

C-LAB: CREATOR/NOTATOR

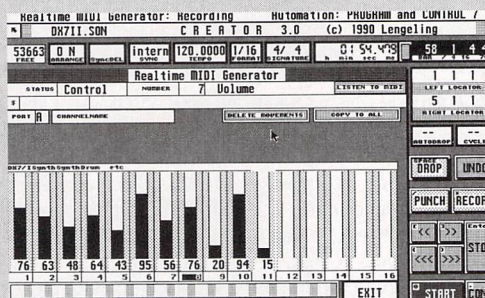
If you need a scorewriting and printing capability as part of your sequencing software, *Notator* is an obvious choice having a very highly developed, fast built-in system. *Creator* does without the notation, but otherwise carries all the features of *Notator*, including excellent quantisation options and a good variety of graphic editing methods. C-Lab's multitasking system is called Softlink, and comes as part of the package. *Notator* comes in at £550, *Creator* at £330. You can get hold of these packages from Sound Technology ☎ 0462 480000

HYBRID ARTS': SMPTE TRACK GOLD

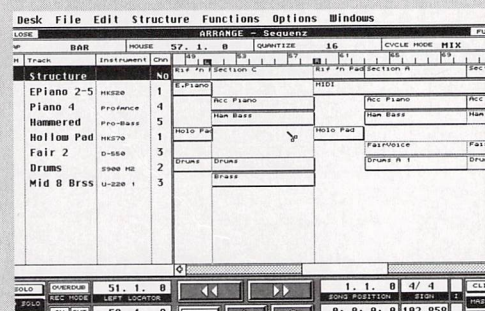
SMPTE (pronounced "simpltee") originally stood for Society Of Motion Pictures and Television Engineers, but it has also come to refer to the type of timecode which that organisation originally developed. This package comes complete with a SMPTE synchronisation device, hence its name. Consider this package if you know that you want to be able to synchronise to tape – at under £465.30 for the whole lot it represents good value for money, and you get excellent graphic editing into the bargain. Contact Atlantic Audio on ☎ 071 272 8944.

DR T: KCS OMEGA

This is the latest version of *KCS* (the Keyboard Controlled Sequencer) – a package which has been around for a long time now. It is famous for its rock-steady timing and for having one of the first multitasking systems, the Multi Programming Environment. Programs which were previously available separately are all bundled together in *KCS*



● Although *Creator* is really aimed at the professional user, its user-friendly icons and keyboard shortcuts make it an ideal tool for the talented amateur. It features some very powerful recording and editing functions with a very fast sound processor.

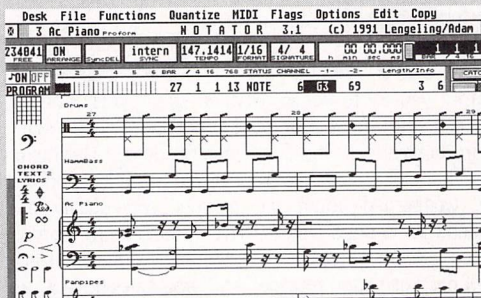


● *Cubase* is a cheaper version of *Cubase* and features many of its big brother's editing and sequencing facilities including the cut, paste and erase functions. Key Edit gives you a vertical keyboard with notes shown as horizontal rectangles, while Grid Edit gives you all the info in a vertical list.

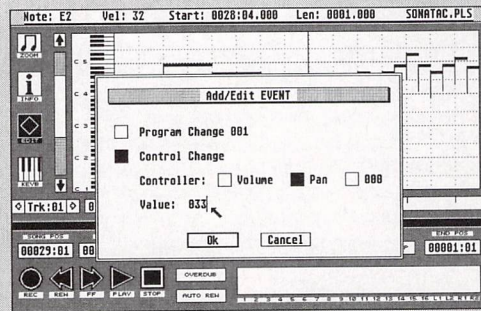
Omega, contains *Tiger* (a graphic editor module) and *Quickscore* for fast notation display. Also included is *PVG* (Programmable Variations Generator) which enables you to tell your ST to do some composing for you. Best of all it only costs £299 from Zone Distribution ☎ 071 738 5444.

GAJITS: SEQUENCER ONE PLUS

Not really a top of the range product, but astonishing value-for-money and an ideal direction to take if you've just



● *Notator* has extensive editing facilities including a Matrix Editor and a Score Editor. Sequencing takes the form of patterns, pretty much like a drum machine, and up to four of them can be played at once. *Notator* also enables you to export files into DTP programs.



● Although *Sequencer One Plus* lacks a realtime quantize option, it more than makes up for it with its diamond drag feature. It's also exceedingly fast – much faster even than some of the more professional sequencers. A vast improvement on *Sequencer One* and very good value-for-money, indeed.

learned how to get the best out of *Sequencer One*. The program uses a very neat graphic note editing system called "Diamond Drag," whereby each note has diamond-shaped "handles" which may be clicked on with the mouse for fast, accurate editing.

Sequencer One Plus makes other graphic note editing systems seem like an unnecessary strain on the eyes. What's more it only costs £129.95 new and £49.95 as an upgrade from *Sequencer One*. Get in touch with Gajits on ☎ 061 236 2515.

KEYBOARDS, SOUND MODULES AND SAMPLERS

Many professional keyboards have sound module equivalents – so you often have a choice of buying a synth with or without the actual keyboard. For example, the Korg M1, which is a multitimbral keyboard, has a sound module equivalent called the M1R. The R stands for "Rackmountable" – it can be screwed into a standard 19 inch wide rack along with many other types of studio equipment.

Synths and sound modules often come in families of devices based around the same concept or method of synthesis. In the same family as the M1, you can also find M1R and M3R rackmountables and the T1, T2 and T3 keyboards. The T-series all have larger LCD displays, more onboard memory and extra built-in sounds. The differences between the T1, T2 and T3 all relate to the lengths and characteristics of their keyboards.

As for samplers, they are definitely not to be confused with software samplers! Professional MIDI hardware samplers handle all the processing of sampled

sound, while the ST triggers these sounds via MIDI. Samplers do tend to be expensive, but it's worth it.

The best top-end samplers are the Akai S1000 and S1100 and the Roland S750 and S770. These are 16-bit stereo samplers – the cream of the crop and we're unfortunately talking thousands of pounds, not hundreds. You can pick up Second-hand samplers quite easily in your local press or music shop – you're generally safe with anything by Akai or Roland that starts with an "S". Also recommended are the Casio FZ1 and FZ10.

Do bear in mind, though, that every time you buy an extra device for your system you gain another pair of audio outputs – at least – which have to be connected to an amplifier.

Assuming that you want to hear all you gear playing at once, you need a mixer with a sufficient number of inputs. Also, if you've splashed out on high-quality synthesizers, you may want to get a good amplification system to do justice to them.

General advice:

1. First contact manufacturers for information about their products and where to get them, giving an indication of what you're after and how much you would like to spend.

2. Before you buy, ask your dealer for a full demonstration. No matter what they say about a synth or sampler, it's how it sounds to you that matters most. The following list of manufacturers and some of their products will get you started.

MANUFACTURER: Roland

SYNTHS: JV30, JV80, D5, D10, D20, D50, D70, JD800

SOUND MODULES: U110, D110, MT32, CM32, CM64, CM300, SCC1 (Sound Canvas)

SAMPLERS: W30, S330, S550, S750, S770

CONTACT: ☎ 0792 310247

MANUFACTURER: Yamaha-Kemble

SYNTHS: PSR400, PSR500, SY22, SY55,

SY77, SY99

SOUND MODULES: TG33, TG77

CONTACT: ☎ 0908 366700

MANUFACTURER: Korg

SYNTHS: M1, T1, T2, T3, 01/W, Wavestation

SOUND MODULES: M1R, M3R, 01R/W, 03R/W, Wavestation A/D

CONTACT: ☎ 081 427 5377

MANUFACTURER: Akai

SAMPLERS: S900, S950, S1000, S1100

CONTACT: ☎ 081 897 6388

MANUFACTURER: E-Mu Systems

SOUND MODULES: Proteus (I and II)

SAMPLERS: Emulator (1, 2 and 3), Emax (1 and 2), Proformance

CONTACT: ☎ 0875 813330

MANUFACTURER: Ensoniq

SYNTHS: VFX

SAMPLERS: EPS, EPS16+, EPS16R+

CONTACT: ☎ 0462 480000

tion works. Now you're ready to upgrade your home system. Where should you start?

WHERE TO PUT YOUR DOSH

Before you try to decide what to spend your money on, ask yourself what is most important to you. Want more control over the songwriting process? Get hold of some professional sequencing software as a priority. Concerned about the number and quality of sounds to choose from? Think about getting some patch editing software, a good quality synthesizer keyboard or sound module, or, if you can afford it, a MIDI sampler. Or are you keen to be able to record vocals and acoustic instruments? If so, you need microphones, a multitrack tape recorder, a mixer, and probably a timecode reader/generator. Time-

code reader/generators – or synchronisers – enable you to lock your sequencer's song position to the movements of the multitrack tape. It works like this: First, you use the synchroniser to generate a stream of timecode which is recorded onto one track of your tape. Then, when you press Play on the tape recorder, the synchroniser "reads" the timecode from the tape and converts it to MIDI Clock and Song Position Pointer data. This MIDI data is then sent to your ST to keep the sequencer (which must be set to External Sync) in time. In this way, all the MIDI instruments in your system are heard at the same time as the music coming from the tape machine – and are perfectly synchronised. This is essential for serious work, because without it you have to finish all your sequenced music and record it onto tape before

adding any vocals or acoustic instruments. Apart from using up tape tracks, it means that you can't go back and make changes to the sequenced music.

YOUR OWN PLACE

A multitrack tape recorder can transform your MIDI system into a home recording studio. The cheapest option is a portable multitracker with a built-in mixer, such as the Fostex X-18 four-track recorder (£259). But are four tracks enough?

If you want to record a lead vocal, two tracks of backing vocals and a guitar, you're already pushing it because your synchroniser needs one track of tape for recording the timecode. It is possible to "bounce" (combine) two or more recorded tracks onto another track to make extra tracks available, but there is limited scope for this when you only have four tracks to start with. Also, each time you do this you lose some sound quality, and, because bouncing determines the relative volume levels of the tracks in question, you sacrifice some control of the final mix.

Eight-track recorders cost a lot more than four-track ones, partly because they are unable to take advantage of the standard cassette tape format, but they do give you an enormous amount of scope. You definitely need a mixer if you are using eight or more tape tracks, and you'd benefit from a high-quality stereo tape machine of some kind – preferably a DAT (Digital Audio Tape) recorder.

Shops which sell recording equipment often have an ST permanently set up in them – make sure you buy equipment that's supported by ST software. STs are now able to control many types of studio equipment, including effects units, mixers and multitrack tape recorders – they are at the heart of the typical modern recording studio and future developments in MIDI and music technology are likely to ensure that they stay there. As the owner of the machine which was made for music, you are well-placed to take advantage of it.

Watch out for the next issue – we'll be featuring a round-up of available MIDI software, information about advanced sequencing to take you on from here and there might even be an exclusive preview of a special MIDI package. **stf**

PATCH EDITING SOFTWARE

If you have a reasonably good synth or sound module, it's worth getting a patch editor which enables you use your ST to edit its sounds. All patch editors have librarian functions too, so you can catalogue and save banks of sounds to disk. Ideally you should aim for a universal (generic) editor capable of editing any synth. These do cost more, but they're a good investment because they cover most

existing devices – including some MIDI reverb units – and can usually be updated to support any new synths. The important thing is to get one that can multitask with the sequencer of your choice – the advantage of being able to edit sounds without leaving your sequencer is too great to miss. Consult the chart below.

WHICH EDITOR TO CHOOSE

YOUR SEQUENCER	BEST UNIVERSAL EDITOR	PRICE/SUPPLIER
Cubase	Any MROS compatible editor	
Creator/Notator	C-Lab Polyframe	£299 from Sound Technology ☎ 0462 480000 or any Softlink compatible editor
SMPTETrack Gold	Hybrid Arts' Genedit	£245.58 from Atlantic Audio ☎ 071 272 8944
KCS Omega	Dr T's X-OR	£219 from Zone Distribution ☎ 071 738 5444
Any GEM-based sequencer	Chameleon	£89 from Keynote ☎ 0761 432610

STEP FORWARD

the world microdeal music

SAMPLERS & SEQUENCERS EXPLAINED

SAMPLE: A sound that has been loaded into a computer and is represented by numbers (digital) rather than noises (analogue).

SAMPLER: Usually a small cartridge that allows you to take sounds from a microphone (with amplification), tape, CD etc and record (digitize) them into your computer's memory. Once in the memory a sample (sound) can be changed using the sampling software.

SAMPLING SOFTWARE: Allows you to alter sounds that have been digitized by the SAMPLER. Normal functions with sampling software include loading and saving a sample disk, altering the sample by cutting, speeding up/down, fading in/out, joining to other samples and much much more.

SEQUENCER: A sequencer takes musical notes and then allows you to play them back in an order (Sequence) that you determine. Microdeal make two types of sequencer, **QUARTET** is a sample sequencer and plays back samples out of the computer. **CONCERTO** is a Midi sequencer that plays back musical notes using any Midi Instrument.

STEREO REPLAY

Our top Stereo sampler plugs into the cartridge port on the side of the Atari and has both Input and Output sockets to allow you to record Stereo sound into the ST and then play back in high quality through an amplifier. The software includes a full featured

editor that allows you to tailor samples plus a STEREO BEAT program which is a 3 channel drum sequencer. The software also includes a 3D display program to allow you to see the digital structures of a sample. REPLAY STEREO will also load 12 and 16 Bit samples and save them as 8 Bit in either Stereo or Mono. The package also includes routines to play back samples in Hi-Soft, GFA & STOS basic.

SAMPLER, SAMPLING SOFTWARE & MANUAL £89.95

QUARTET

This sophisticated sequencer allows you to take samples and sequence them into music. Imagine your samples as a band with **QUARTET** as the conductor, your band is composed of 20 instruments of which 4 can play at any one time. **QUARTET** comes with 100 instruments and sounds for inclusion in your own compositions and further sounds can be added using **STEREO REPLAY** and **STEREO MASTER** or other samplers. The music is represented as notes on a staff and can be input by the mouse or if you have a synthesiser keyboard with a Midi out socket by playing on the keyboard. Control of the music includes Tempo, Pitch and **QUARTET**'s digital processing software (**DIGITAL.PRG**) allows you to change the pitch size and volume of individual samples. Who knows you could easily be tomorrow's "Adamski" or "Mozart" with this highly acclaimed package.

stereo MASTER

Our new stereo sampler is low in price but high in features. the new style mini cartridge plugs into the cartridge port on the side of you Atari and even includes a lead with mini jack for immediate connection to your walkman or headphone socket on your amplifier. Once connected you can load stereo sounds, edit them, analyse them, and even change real time sounds by adding special effects to the output such as echo, pitch up, pitch down, and more. we even include midi support so if you have a Midi keyboard you can playback different samples from mapped out areas of the keyboard. Output from **STEREO MASTER** is via the speaker on your TV or monitor or if you have an STE you can connect up the hi-fi ports to an amplifier for high quality output.

SAMPLER, SAMPLING SOFTWARE & MANUAL £39.95

CONCERTO

Our powerful but friendly Midi sequencer allows you to compose and arrange any type of music from Classical to Rock, Pop New Age and Jazz. Use it with any Midi instrument and record up to 24 tracks and assign them to 100 patterns. Link the patterns together to form a complete song. Five different editors **SCORE**, **STEP TIME**, **GRID**, **DRUM** & **EVENT** give you features only included in sequencers which presently cost ten times as much. Tape deck style controls make recording and playback easy and the mixing desk allows you to add five effects to your song including tempo, pitch bend and control changes. You can "ride the faders" mixing the volumes of each track just like a mixing desk in a recording studio. If you are a STE or TT owner you can even sequence samples into your songs. All in all, the main song **CONCERTO** sings is that it's amazing value for money.

MIDI SEQUENCING SOFTWARE & MANUAL £39.95

WORLD OF MUSIC ORDER FORM

PLEASE SEND ME	QTY	PRICE EACH	TOTAL
STEREO REPLAY		£89.95	
QUARTET		£49.95	
STEREO MASTER		£39.95	
CONCERTO		£39.95	
POST & PACKING		£1.00	
GRAND TOTAL			
ENCLOSED			



TO ORDER: Simply phone 0726 68020 with your credit card number or fill out this coupon and send together with your cheque /postal order or credit card number to:

MICRODEAL LTD, PO BOX 68, ST AUSTELL, CORNWALL. PL25 4YB

NAME:

ADDRESS:

POSTCODE:

CREDIT CARD NO:

EXPIRY DATE:

...../...../199.....

Microdeal products are available from your local computer shop or direct from Microdeal. Already own a Microdeal Sampler and want to upgrade? Phone 0726 68020 for details.

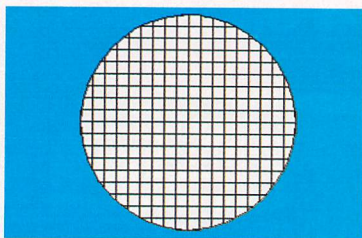
Pixel painting



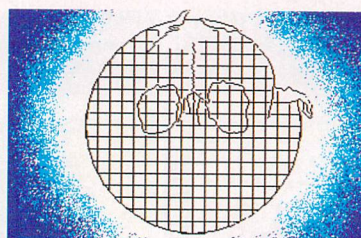
This is where we take a gander at the best offerings lurking in the Gallery mailbag – actually a particularly tasteful cardboard box. As usual, there are some rather groovy pictures this month, so please wipe the sleepy dust from your eyes and let Clive Parker take you for a good look inside

OXYGENE

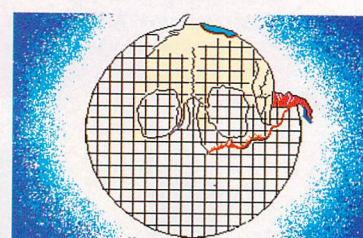
Kevin Blake of Lincoln sent in this Canvas version of the cover of Jean Michel Jarre's *Oxygene* album. Kevin has only had his ST for a few months – and this is the first picture he has attempted with Canvas and it wins this month's £25. Kevin relates the rigours of his pixelated creativity.



1 "I placed a size one grid on the screen to locate the centre point so I could position the main circle. This method was suggested by Paul Keller in *STF 33* and it enabled me to keep the proportions of the picture correct. I then roughly filled in the background using the album cover for reference.



2 I chose four shades of blue and sprayed them onto the background. I then used zoom to draw the outline of the skull. One drawback with Canvas is that you cannot see an actual size view of the section of the picture you are working on while you are in zoom mode.



3 I selected the correct palette for the rest of the picture. There are many different shades in the original and I began to worry about what I had let myself in for.

UNCLE FESTER

Phil Willcox of Cardiff created Uncle Fester of the Addams Family which he copied from an advert. He said: "The hairless head of Uncle Fester staring out from an *Addams Family* advert seemed to be a good subject – he seemed sinister in a friendly sort of way. So I loaded up my trusty Neochrome and got to work.



1 I know you're supposed to do a rough outline first to get the proportions right, but I don't always bother, Uncle Fester is a case in point. I usually start with the right eye, judging the proportions of the other features relative to this one. This is bad technique but it works for me!



2 At this stage, both eyes are now in place and the picture is beginning to look pretty spooky. I created all of the eye detail with the pencil under magnification and the surrounding flesh tones with a small brush.



3 I tidied up the left eye and darkened the area underneath to make the nose stand out. I like to limit my palette especially with this type of subject, using a limited number of hues but as many degrees of tone as possible. This gives a more natural – not to say creepy – appearance to the picture.

CRYSTAL VISIONS

Crystal Visions is the latest picture by Gallery regular Mark Deighton of Enfield. Once again Mark produced the picture using Neochrome.



1 "I started using the shape option in solid mode rather than drawing everything with the pencil. This enabled me to position the chair, table and rear wall. The wall's surround was sprayed using different sizes and different shades of colour and I drew the perch using the line option on a thick setting. I then drew the ball with a solid shape option and the rough shape of the curtain with a large brush.



2 I changed the colour of the curtains and slightly altered them. The skulls were drawn on a different screen using the magnify option and the pencil. I used the knife option to cut out the skull and paste it to the top of the chair. I prefer using the knife for fine work because you don't have to worry about the background being overdrawn.



3 I did more work to the background using the pencil and the magnify screen. I added detail to the chair on one side, then copied and pasted this detail to the other side using the block copy option. I shaded the perch using the line option on its thinnest setting with different shades of colour. At this stage of the drawing it is important to realise where the light source is coming from and to shade details accordingly.



4 I used two shades of brown for the table – I drew the detail using the line option and a darker brown. I added highlights with the pencil. I drew the curtain folds freehand using the pencil and shaded them with the airbrush. The rough position and pose of the woman was drawn freehand using the pencil – at this stage accuracy is not too important.

Bland glanced nervously towards the front door. It was beginning to splinter under the impact – surely they would not dare try to force entry in such a blatant fashion? Bland had a sip of carrot juice. There was a terrific crash and then... Oops, sorry about that. Just finishing another chapter of my latest novel enti-

tled *Yet Another Political Thriller With A Subtle Left Wing Bias*.

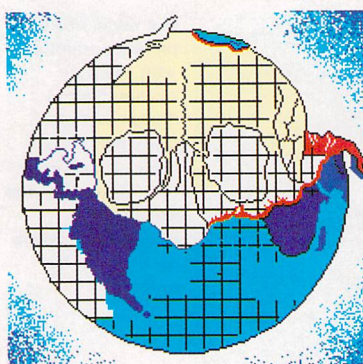
Let's get down to business. There are three works of art this month and all of them are rather spiffing. They range from the illustration on a rather famous album cover to an equally well known comedy-horror character. Remember, the best piccie every

month wins the cheekily modest sum of £25 in a cheque-style format.

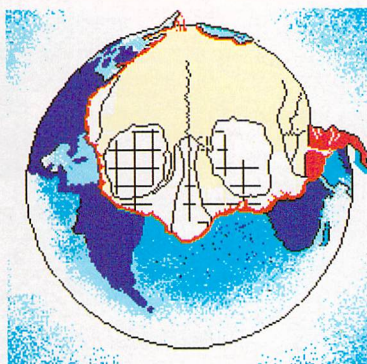
Send in your picture on a floppy disk – preferably as an ASCII text file – telling us how you created it and what package you used. We want to know everything from the basic outline to the final finished masterpiece with plenty of intermediary steps. Oh yes, the

address to send them to is I've Drawn A Masterpiece And I'm Not Afraid To Show It, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW. **stf**

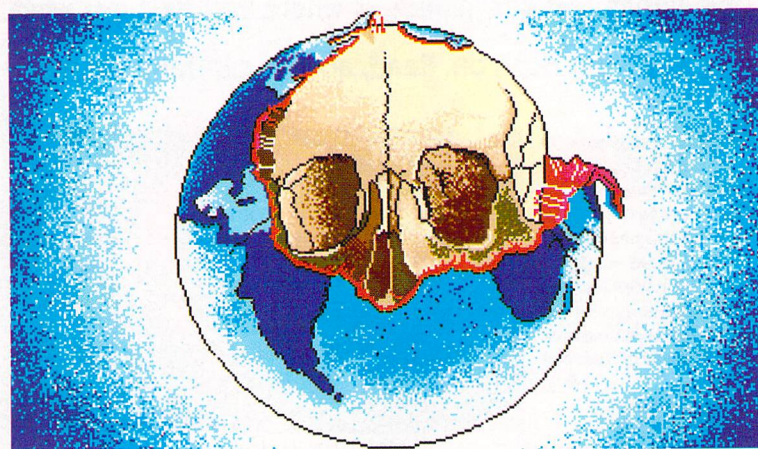
● We gave away Canvas on Cover Disk 34 – if you don't have a copy, turn to page 40. You can get hold of Neochrome for £5.95 from Goodman Enterprises ☎ 0782 335650.



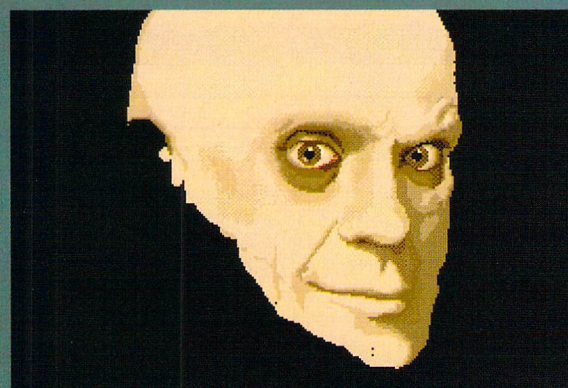
4 I only removed part of the grid when I was sure that I had the picture's proportions correct. I also added colour occasionally so I could see how the image was developing. It was a very time-consuming exercise using the grid and zoom, but well worth the effort.



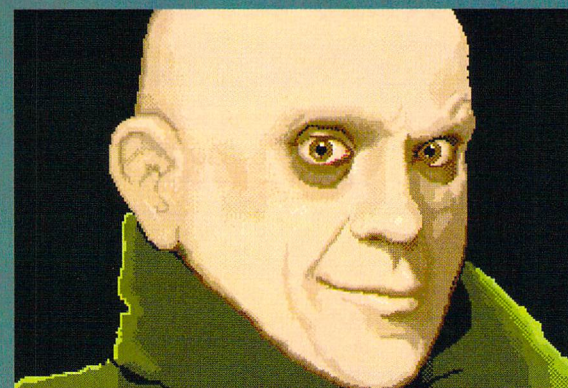
5 When all the outlines were complete, I chose my final palette using four shades of blue, three skull shades and three reds to give the picture some depth. I added some little touches like the sticky bits of the Earth's crust at the top of the skull.



6 By this time I was quite confident about using zoom at the lowest magnification. I shaded the picture using a combination of zoom and the smallest spray available. It took about an hour to get the shading just right, but I think that the final picture reflects the effort involved."



4 I've done a lot of work since saving the previous stage of the picture – the face is now more or less finished. I decided that the picture was too far to the left, so I moved it across to the right a little using the copy-box. This is something you can't do with an oil painting!



5 The final stage. The robe was grey in the original photograph, but I felt that my version needed a bit more colour – green seemed the spookiest colour to use. I kept the face fairly light in order to convey Uncle Fester's ghostly pallor."



5 By this point I had spent about three hours working on the drawing. The woman took about six hours to draw – I used the pencil and airbrush options in the magnify screen. One of the hardest parts of the drawing was judging where the shadows would be.



6 At this stage I wasn't entirely happy with the face of the woman or the palette, so I changed the palette. After spending so much time on the woman, I decided to leave her for the moment and concentrate on the smaller details in the rest of the picture.



7 On the right of the picture you can see the initial stages of the drawing of the woman's pet on its perch. I drew this freehand using the pencil to get the basic shape.



8 The final picture with everything in place. I lowered the woman's features so that she looked younger. I changed the reds and the flesh tones in the palette to give a richer feel. Some minor touching up with the pencil and the adding of a few more shadows completes a picture that I am really pleased with. In the end it took about 24 hours from start to finish."

Out now

This, ladies and gentlemen, is where you find out what to spend your dosh on. Read, absorb carefully, then act

● **HPChrome** goes with the Deskjet perfectly—together they help you produce lovely prints, from the near photographic quality of Madonna complete with subtle skin tones, to the bright and brash cartoon colours of Tom and Jerry.



0 Rufus Developments 1992
File: MADONNA.P11
Size: 5.33 x 3.33in
Position: X:1.62 Y:1.58
Crop: 320 x 288
Draft Normal Best
Colour View Options
Exit [M] Print

● This central menu in **HPChrome** leads off to various sub-menus enabling you to make comprehensive adjustments to the print.

Technicolour dream

HPChrome

MACHINE: ALL STs, ALL RESOLUTIONS

PRICE: £2.50

FROM: CALEDONIA PDL

CONTACT: 0463 225736

HPChrome is the first ever program – PD or otherwise – to enable you to print 16 colour Degas or Neochrome pictures on Hewlett Packard's Deskjet 500C (reviewed in issue 36 – turn to page 40 if you don't have it) and it can also turn any of the mono Deskjets into colour printers.

The 500C uses a unique three-colour ink-jet print-head to produce full colour prints. Until recently, only the DTP package PageStream v2.1 could utilize this printer. **HPChrome** is available as a Public Domain program with no features disabled, but to get a registered copy with manual, you have to fork out a fiver.

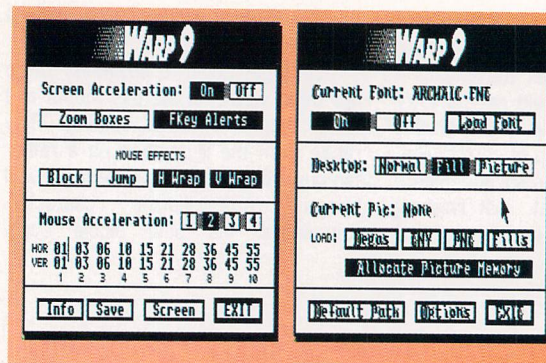
So if you have a Deskjet, Deskjet Plus or Deskjet 500, you can print in colour. **HPChrome** manages this by controlling these mono Deskjets to print multiple passes on the same sheet of paper using different colour inks. This involves using empty Deskjet cartridges which have been refilled with coloured ink. To produce a full colour picture you need three such cartridges, containing red, blue and yellow ink. Details of

where to obtain these "colour kits" is provided in the manual which comes with the registered version of **HPChrome**. Each time the paper is put through the Deskjet you have to change cartridge – the overprinting of the separate colours combines to produce a good likeness of all hues according to the relative concentration of little coloured dots produced. Black is produced by printing all three colours – resulting in a very dark green rather than true black. Alternatively you can use a standard black cartridge to provide a final pass if your picture has large areas of dark or black sections.

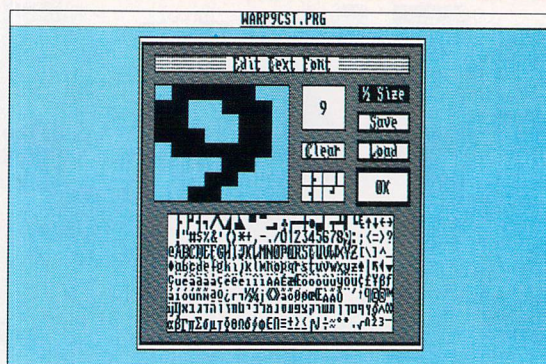
The program enables you to control the colour balance as well as the size and position of the image. However, the default settings are arranged so that you can print your images out straight-away – you can even preview them on-screen. **HPChrome** is a superb program at a ridiculous giveaway price, and is the ultimate accessory for your Deskjet printer.

PETER CRUSH

STF RATING – 90%



● The two main dialog boxes of **Warp 9**. The box on the left enables you to mouse to customise, to switch the function key alert option on and off and to toggle the zoom boxes on and off. The left box enables you to load fonts, fills and background pictures.



● A small utility program supplied with **Warp 9** enables you to design and alter fonts and fill patterns. This is the font editor with the Archaic 8x8 medium resolution font loaded for editing.

The engines can'nae take it...

WARP 9

MACHINE: ALL STs

PRICE: £29.95

FROM: SYSTEM SOLUTIONS

CONTACT: 0753 832212

Warp 9, a completely revamped version of **Quick ST**, is a screen acceleration utility compatible with all STs. Install this and all GEM screen updates positively fly – windows open and close in a fraction of the normal time, text scrolls dramatically faster in all word processors and the screen redrawing and updating in DTP packages makes them a pleasure to work with.

There are several excellent utilities contained within **Warp 9**: a configurable mouse accelerator, a font designer with 72 screen fonts, function key control of alert boxes with the <F1>, <F2> and <F3> keys operating alert box buttons in order from left to right, the ability to place a fill or a picture on the Desktop as a background and several other useful mouse control options. The mouse pointer can be configured to wrap around the screen both horizontally and vertically, to jump to the menu bar on a right mouse button click and to be blocked from the menu bar.

The program itself comes in two separate parts – the **Warp 9** program and the **Warp 9** Accessory. The program uses up about 68K of RAM and

the Accessory uses 17K, though if you are using a 520K machine you probably have to disable any other Accessories you have on your ST to make the most of **HPChrome**. If you are short of available memory then the program can be customised and configured so that it runs without the Desk Accessory, saving 17K of vital RAM space.

You must place the program in the AUTO folder of your boot drive and the Accessory in the root directory, all other accelerator programs must be disabled to prevent clashes with **Warp 9**. It is not designed to replace the VDI (Virtual Device Interface) of the ST in the same way that **NVDI** does (see review in *STF* 35) – it is purely a GEM screen graphics accelerator with a few other extra utilities thrown in. Because of this it does not speed up any program that does not use GEM for its graphics output.

All in all, this is an elegant piece of programming with an easy-to-follow manual. **Warp 9** is recommended if you need a screen accelerator.

CLIVE PARKER

STF RATING: 88%



● It's small but perfectly formed – the Fujitsu DL1100 should be high on your “when I've got enough money I'm going to get one of those” list.

Wide load ahead

DL1100 24-pin wide carriage printer

MACHINE: ALL STs

PRICE: £351.33

FROM: FUJITSU EUROPE LTD

CONTACT: 081 573 4444

If you don't have very much space in your working area, this printer could be just what you need. For a wide carriage printer this machine has a very small footprint – about 9 inches deep and 18 inches wide, so it's ideal if you want to use it in cramped conditions.

The Fujitsu DL1100 can emulate three other machines – the Epson LQ2500, Epson LQ2550 and the IBM XL24 – as well as running in its own default mode. You select options and configure the machine from the top mounted control panel. The options are printed on paper and selected by pressing the function keys. It can use continuous paper or you can feed single sheets in one at a time – a cut sheet feeder is an optional extra.

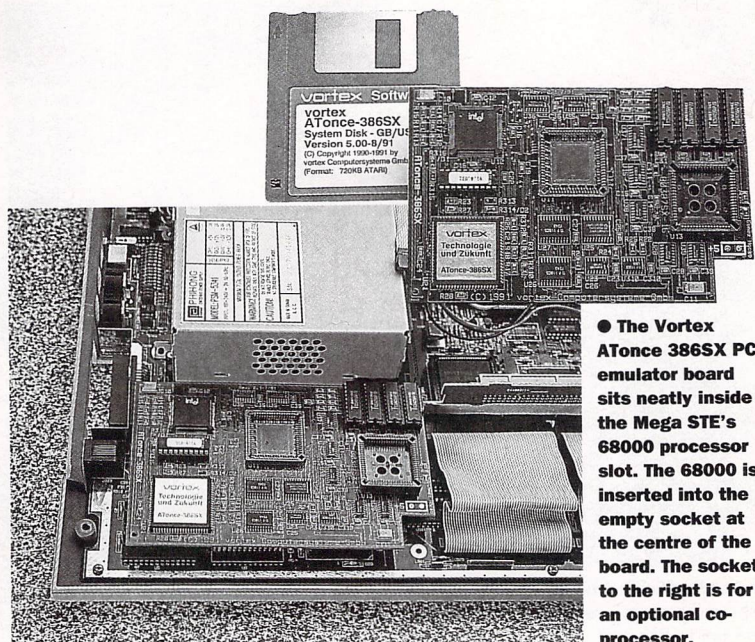
As a test, we selected Epson LQ2500 emulation, installed *Write On* and printed the Demo2 document. The output quality was excellent – even better than the Fujitsu ink-jet – see page 110. This is because of the 360 dpi

resolution of this printer as opposed to 300 dpi on the ink-jet, but the graphics IMG printout was not quite so good with marked banding in the black areas. With smaller images the output is markedly better.

GFA Draft produced almost perfect results in both portrait and landscape output modes with a detailed perspective drawing of the Space Shuttle flying as the test drawing – have a peek at issue 34 of *STF* if you want to see exactly what we're talking about. Print output times in all cases was much slower than an ink-jet, the large IMG file taking nearly five minutes to print and the GFA drawing taking just over four minutes. ASCII output in draft mode is a nifty 150 cps (characters per second) with a high speed draft mode of 200 cps available. Output when the printer is emulating either of the Epson LQ printers was a more sedate 50 cps.

CLIVE PARKER

STF RATING: 87%



● The Vortex ATonce 386SX PC emulator board sits neatly inside the Mega STE's 68000 processor slot. The 68000 is inserted into the empty socket at the centre of the board. The socket to the right is for an optional co-processor.

Masters of the Vortex

Vortex ATonce 386SX

MACHINE: STE, MEGA ST, MEGA ST. MINIMUM OF 1MBYTE REQUIRED

PRICE: £330.00

FROM: SILICA SYSTEMS/HCS

CONTACT: 081 309 1111/081 777 0751

The Vortex ATonce 386SX is an internal plug-in PC emulator that enables an STE or Mega STE to run 386 specific PC software. We tested the Mega STE version. Installation is fairly straightforward once you have taken the lid off your Mega STE. You have to remove the 68000 processor from its square socket on the ST motherboard and plug it into the corresponding processor socket on the ATonce card. A special tool is recommended to remove the square 68000 from the motherboard although you can do the job by carefully using a small screwdriver to prise it out. The card has a square plug underneath it which plugs into the 68000 slot on the motherboard. There is another socket on the surface of the board to accommodate a 80387SX co-processor number cruncher for powerful applications.

Once the machine is reassembled and booted, you can install the software. This is supplied on a single double-sided disk containing the Vortex initialisation software, an installation program and a folder full of MS-DOS programs and utilities. You have to supply your own copy of MS-DOS – you can pick copies up second-hand for about £10 to £15. Try and get v3.2 or above so that 720K drives are supported. The installation program runs in

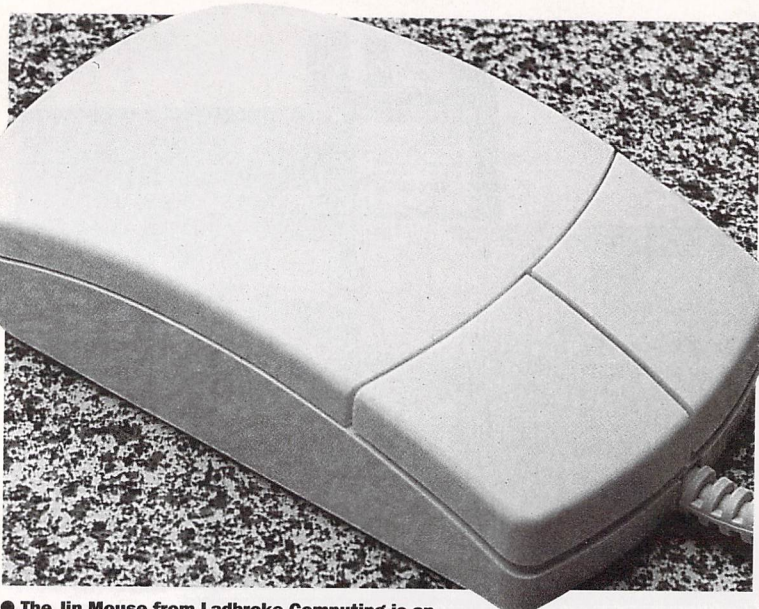
low or high resolution only and enables ATonce's functions to be set up to suit your ST's configuration. For example, you can set the keyboard to the correct language, both 720K and High Density floppy drives are supported, any ST hard drive partition can be set up to run as an MS-DOS boot drive to prevent boot sectors from clashing and you can set the system up to read any ST partition as if it were a PC partition. The board works best using the ST's monochrome high res mode to emulate mono VGA PC mode. Colour modes are also supported.

Memory on machines with over 1MByte of RAM can be configured as PC extended or expanded memory, so you can install Windows 3 or 3.1. Once the software has been installed, you just run ATonce and MS-DOS, either from floppy or hard drive. The infamous A: or C: prompt appears, place a PC disk in the drive, type in the name of the program you wish to run and away you go. 95% of all PC software runs without problems – you need additional hardware for the other 5%.

ATonce 386SX is simple to install and convenient to use – this board is a must if you need PC emulation on your STE or Mega STE.

CLIVE PARKER

STF RATING: 83%



● The Jin Mouse from Ladbroke Computing is an albino creature, available in any colour so long as it's white. Although it's not at the top of the range in terms of replacement mice, it's far better than the standard ST mouse, being more comfortable and smoother to use.

White mice

Jin mouse

MACHINE: ALL STs

PRICE: £9.99

FROM: LADBROKE COMPUTING

CONTACT: 0772 203166

Are you still struggling with the Atari mouse that was supplied with your ST? You may have got used to it by now, but unless you have tried any of the other mice available, you just don't know what you're missing. Without exception, any other mouse – even this unco-ordinated white one, the Jin Mouse – is better, more comfortable, and smoother to use than Atari's.

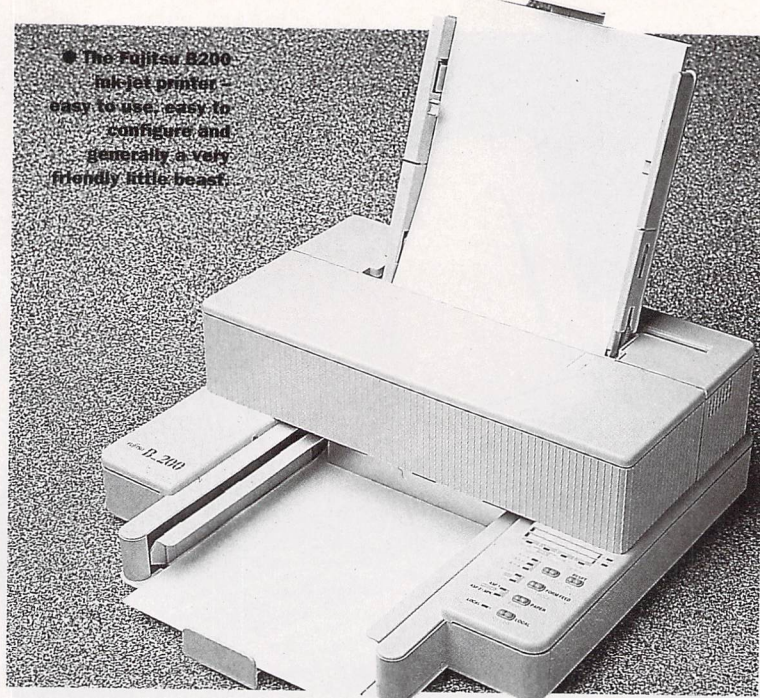
The Jin Mouse comes without instructions or specification. Still, you don't need to know much about a mouse, other than that you should turn your ST off before plugging it in. Ergonomically it feels OK, with smooth contours and big buttons, although it is

a little high and not as low profile as some mice. The resolution is 290 dpi (dots per inch) – higher than Atari's of 180 dpi – so you don't have move it as far over your mouse mat as you do with mice of lower resolutions.

The Jin Mouse is just a plain mechanical device with a rubber ball type base. that works well and, using *Mouse Tricks 2* – reviewed back in issue 34, you can fine tune it just how you want. It's not the best alternative mouse available, but it's probably the most economical one going. You can't go far wrong with it.

PETER CRUSH

STF RATING: 83%



● The Fujitsu B200 ink-jet printer – easy to use, easy to configure and generally a very friendly little beast.

'Squids to print

B200 ink-jet printer

MACHINE: ALL STs

PRICE: £586.00

FROM: FUJITSU EUROPE LTD

CONTACT: 081 573 4444

This machine looks like the popular HP Deskjet series of printers and is about the same size. You feed paper in either from the supplied cut sheet feeder or from a second optional tray. There is also an optional sprocket feed available which can be used with continuous fanfold paper.

The printer has its own default settings which are not yet supported by many programs in the UK, but it can be driven by both HP Deskjet and Laserjet printer drivers although the HP options do not fully exploit all the printer's capabilities. Because almost all ST software is supplied with HP printer drivers, there should be no problems with producing hard copy.

The setup procedure is clearly explained in the manual – you alter the options from the control panel. We

tested the printer with *Write On* (STF Cover Disk 33) and *GFA Draft 3* (STF Cover Disk 34) to check its graphics and text abilities. *GFA Draft* is supplied with a Laserjet driver. The traditional Space Shuttle drawing

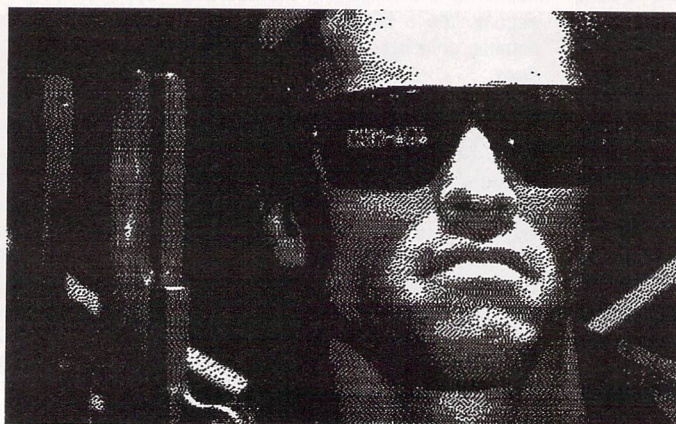
was loaded and output via the print routine – printing started after about 30 seconds delay and the A4 page took about 45 seconds to print. The print quality was good with little evidence that it was produced by an ink-jet rather than a laser printer.

Write On was installed using the HP Deskjet 500 hard drive option, then we loaded and output the Demo2 document from the Cover Disk. The printer started up almost instantly and printed each page in about 25 seconds, the total file (8.5K in length) being printed in just over a minute. The text quality was not quite up to laser standard but this may have been because *Write On* was using graphics mode for text output. An ASCII text file printed directly from the Desktop printed with much greater clarity.

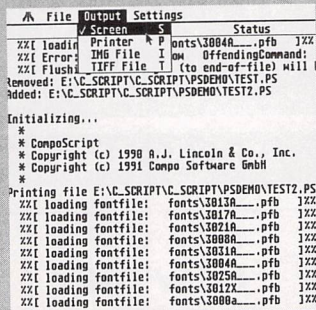
We loaded an A4 .IMG file into *Write On* and printed it, it took about one and a half minutes and the result was impressively good. There was some slight banding on the large black areas but apart from this the quality was excellent.

CLIVE PARKER

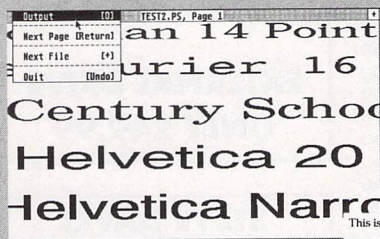
STF RATING: 82%



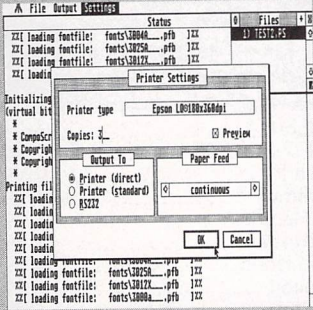
● This rather attractive picture – created from an .IMG file – of the stunningly handsome Arnie was printed using the B200 ink-jet. The print is a good solid colour, the only problem being some banding in the solid areas above his gun.



● You can add PostScript files that you want to print to the window in the top right of the screen, and process them as a batch. CompoScript helpfully displays a dialog box saying what it's doing.



● The quality of output is pretty good considering it was printed on a simple ink-jet printer. The 35 fonts supplied give you a large enough range for most DTP uses.



● From here you can load in the correct printer driver – there's a very large range to choose from and Compo, who supply the program, promise to help you write your own driver if necessary.

● You can preview the PS file that you want to print on-screen – brilliant if you want to look at a file that originates from another computer system or from a program you don't happen to have.

This is Palatino 10 Point
This is Avant Garde 12 Point
This is Bookman 14 Point
This is Courier 16 Point
This is Century Schoolbook 18 Point
This is Helvetica 20 Point
This is Helvetica Narrow 22 Point
Τηισ ισ σζμβολσ 24 Πουιντ
This is Times 26 Point

PS I love you

CompoScript

MACHINE: 1MBYTE STs WITH HARD DISK

PRICE: £234.00

FROM: COMPO SOFTWARE LTD

CONTACT: 0480 891819

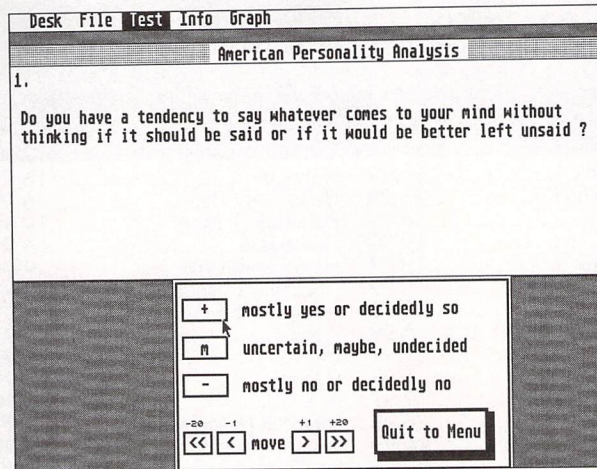
CompoScript is a program that enables you to print PostScript files on non-PostScript printers – PostScript being the page description language developed by Adobe Corporation and made famous by the Apple Mac. PostScript fonts are held in memory chips inside PS laserprinters, and although producing superb quality output, are rather expensive. Only a few ST programs can take advantage of PostScript, and they're no use unless you also have a PostScript printer. CompoScript uses "clones" of the Adobe PS fonts, and the classic set of 35 fonts is provided in the form of good quality bitstream fonts. The program facilitates the showing of a PS file to screen, and can convert it to a graphics file that you can use within other programs that do not support PS. CompoScript even claims to be

able to process PS files from other systems like IBM, Mac and Amiga so long as these can produce PS output.

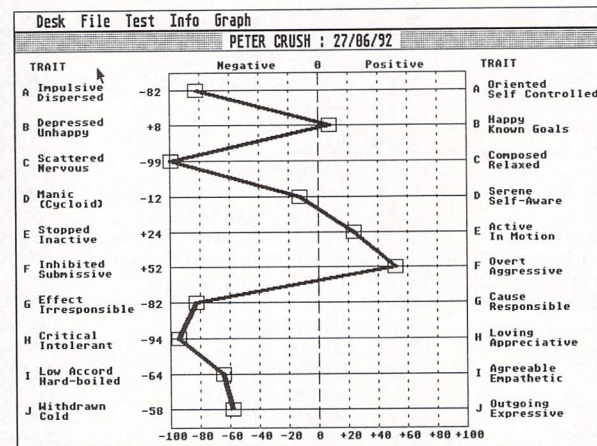
To use CompoScript you need at least 1MByte of RAM and a hard disk, plus a printer that supports graphics – that is, an Epson LX, LQ, NEC P6, Canon Bubblejet, HP Deskjet, HP Laserjet, Atari SLM Laser or other machine which is compatible with any of these. If you use an Atari laser, 4MBytes of RAM is recommended. The forthcoming version of *That's Write* from Compo will be able to output direct to CompoScript – watch out for the review soon in STF. It is a tad on the expensive side, especially with all the hardware you need to have to use it, but with falling prices, the whole setup may soon be more accessible.

PETER CRUSH

STF RATING: 80%



● Yes, most decidedly, yes came the answer to Question One, and with complete abandon the 199 other questions were replied to with that honesty only achieved by STF writers. It was funny how all the answers were either Yes, Maybe or No though...



● Blimey, a bit too close to home for comfort, this analysis. But thanks to the Government Care in the Community Scheme, this irresponsible, intolerant, hard-boiled and slightly manic chap is on the road to recovery and working as a reviewer.

Be a better person

Metapsychology

MACHINE: ALL STs, HIGH AND LOW RESOLUTION

PRICE: \$21.95

FROM: CLEAR THINKING

CONTACT: PO BOX 715, ANN ARBOR, MI 48105, USA

Are you a well balanced sort of cove, or is there a dark side to your personality? Find out by taking the American Personality Assessment in the privacy of your own home. That is one of the options on offer with *Metapsychology Primer*, a program from the States by the man who wrote *EdHak*, a highly rated multi-purpose editor (reviewed STF 35).

The Personality Test involves answering 200 questions with either Yes, Maybe or No. A typical question is: "Do your unexpected actions often surprise others?" but instead of having to total your A, B or C responses at the end, as you would in a tabloid-type quiz, the program does it all for you and displays a nifty graph showing what kind of person you are. The result can be saved to disk together with your name and the date, presumably to enable you to go off for treatment before you retake the test. The saved data can be re-imported to display the graph, which can be printed out, too. Good fun for all the family – as long as

you don't take it too seriously. The other program is less fun, being a Tutorial/Primer on Metapsychology – the study of the origin, structure, and function of the mind and of the relationship between the person, the mind, and the physical universe. It picks up where psychology, as the science of behaviour, leaves off. Dealing with matters like a person's perceptual, conceptual, and creative activity, as distinguished from the actions of his body, it could be said to be heavy, man.

If you seek to reflect on the perennial common goal of therapies, religions, and traditional beliefs, whether one calls this goal the attainment of sanity, of enlightenment, of happiness, of wisdom, or of salvation, the lessons on disk could be right up your philosophical street. If you seriously want to study metapsychology though, a textbook is a better bet, but the Personality Test is a jolly good laugh.

PETER CRUSH

STF RATING: 65%

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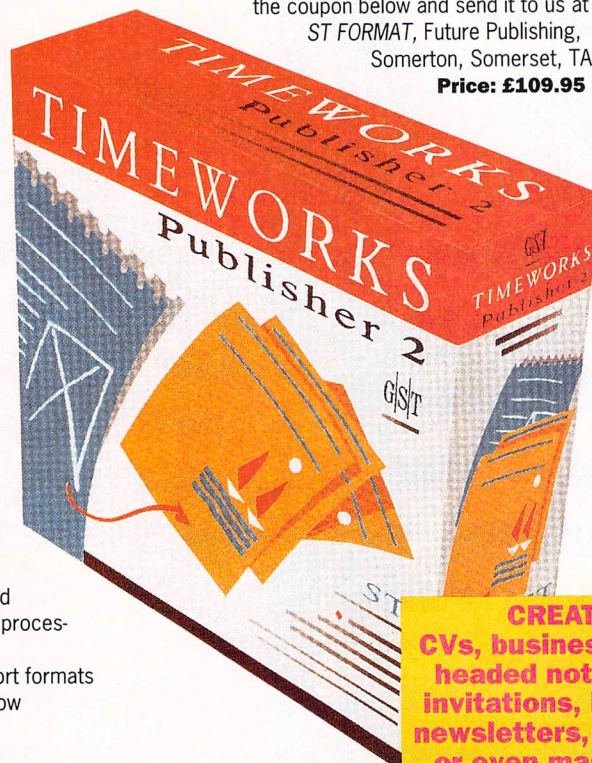
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Getting the program

Don't look but now but here comes a programming tutorial – it's no good hiding, it's seen you and is coming over for a chat. Quick! Run away before you get caught along with Chris Lloyd in the fascinating undersea world of *STOS Basic*

Computer programming is easy – oh, alright not all that easy but it's a darn sight simpler than you might think. All a program consists of is a series of instructions which are carried out one by one. In the heart of your ST these instructions are in binary – there are masses of 0s and 1s which aren't exactly simple to use but they're all your ST can understand. To ease the strain on these two keys and make programming possible for those of us who think in colour rather than black and white there are computer languages. These convert the computer's language into something that you can use.

Step forward *STOS*, a brilliant and powerful language that puts you quickly and easily into the driving seat. Even better – it was yours with last month's *ST FORMAT*. If you had your head in a bucket last month and missed it, turn to page 40 and order yourself a copy – you know it makes sense. Armed with *STOS*, some patience, imagination and hot coffee, the world of programming opens up – games, demos, applications – anything that takes your fancy. *BASIC* has never been so powerful or so easy.

STOS is an interpreter – that is, it takes one command, converts it into something your ST understands, then executes it and moves on to the next one. Programs are typed into the editor as a series of lines, each with a number. Each line can hold a number of commands separated by a colon and are executed in numerical order. Commands typed in without a line number are executed directly – these are called direct commands. Got all that? Right then, let's get coding.

PUTTING THINGS IN THE PICTURE

One of the more seriously impressive features in *STOS*'s cap is the graphics handling capacity. Getting graphics from your art package and into *STOS* ready to be manipulated in various strange and wonderful ways is a piece of cake. You don't have to muck about allocating memory and examining file headers to extract the palette – *STOS* does all that for you. You can load *Neochrome* or *Degas Elite* pictures straight into one of *STOS*'s memory banks. You can have up to 15 of these areas of memory holding any kind of data you like. To load a picture into your *STOS* program, you need to reserve a bank. Entering the direct command – reserve as datascreen 6 – reserves bank 6 for a picture which is to be saved

```

f1: list\      f2: list      f3: listbank\  f4: fload"%*.ba  f5: fsave"%*.ba
f6: run\       f7: dir\      f8: dir$= dir$  f9: previous\   f10: off\

2 rem          ZOLTAR
3 rem
4 rem          Part of the STOS Basic
5 rem
6 rem          By F. Lionet
7 rem          Graphics by D. McLachlan
8 rem          (c) 1988 Jawx / Mandarin
9 rem-----9/8/1988-----
10 if mode=2 then clw : locate 1,8 : centre "I only work on a colour monitor!" :
   locate 1,18 : centre "Press any key." : clear key : wait key : default : end
49 rem '---> Number of alien sprites in the bank
50 ALIENS=10
100 fade 1 : wait 8 : click off : key off : curs off : mode 0 : cls logic
105 dim AS$(10),XX(16),A(10),T(10),S(10),I(10),MAGEDON$(3),MAGXFIRE(5),MAGYFIRE(5),
   PALTITLE(16)
200 reserve as screen 10 : cls 10
205 CODE=$12345678 : BANKMAX=$1000
210 gosub 10600

Ok

```

● Our esteemed editor – here's where you type in your wondrous programs, learn to cope with bugs and take three hour lunches on expenses. Along the top are the function key shortcuts, you can click on these directly with the mouse too. Press <Shift> to access another set of ten.

along with your program. Reserving something as a screen rather than a datascreen is temporary and is lost when you save the program. Now all you have to do is load the picture straight in – load "PIC-TURE.NEO", 6 – pops a picture into bank 6. To get it up on screen try –

```

10 key off : curs off : hide : mode 0
20 get palette(6)
30 screencopy 6 to physic
40 wait key : default : end

```

Line 10 sets things up – it zaps the function key strip, cursor and mouse and switches to low resolution if you're using a colour monitor. It also clears the screen. You're now ready to strut your stuff in the visuals department. First thing is to grab the palette – there's no mucking about decoding headers, one simple command can switch you to the palette of any picture held in a memory bank. *STOS* uses three screens – physic, logic and back. The physical one is the screen that appears on the monitor, anything sent here appears on-screen. The logic screen is where the graphics are drawn, by default this is the physical screen, but you can define the logical screen as a memory bank instead. This way you can construct graphics out of sight and only display it when it's ready – there's no annoying flickering.

The background screen is an exact copy of the physical screen minus the sprites – this is used to fill in the gaps when the sprites move. Line 30 copies your picture in bank 6 on to the screen. Line 40 waits for you to press a key then resets the editor and exits the program. You can break out of a program using <Control> and <C> together, then reset the editor by pressing the <Undo> keys twice but it's easier to pop a line at the end of your code so that it exits cleanly for you.

COLOURING BY NUMBERS

Clever use of colour can improve otherwise drab displays no end. *STOS* has a few swish commands for manipulating the colour registers. Hang on, there was a techie word in there – what is a colour register? Your ST is capable of displaying 16 colours on the screen at once in low resolution. These colours are held in what programming types called "registers" numbered 0 to 15. Colour 0 is the background colour – the one that appears around the border of your monitor and is normally left black. The colours are described using a three digit number suffixed by a \$ sign. The numbers represent the amounts of red, blue and green in the colour in the same way art packages do. These values range from 0 to 7. The simplest command is the colour command which changes the value of one register – colour 3,\$700 would put a vivid red into the fourth colour – remember, the registers start at zero. You don't want to type in 16 colour commands to set all the colours. Cue the palette command – that sets all 16 registers at once – palette \$002,\$700,\$456 and so on for all colours. A quick way of setting up the palette of a picture you've already got in a memory bank is to grab it directly using get palette (n) where n is the memory bank number. Right, that's got the colour in place. The command ink is used to set the colour register that any drawing commands use. Try these few lines after you've set up a blank low res screen. The ↵ symbol means no line return yet – the wide lines wouldn't fit in our columns.

```

10 palette $0,$700,$730,$750,$770,↵
   $570,$370,$070,$073,$075,$077,$057,↵
   $037,$007,$307,$507,$707
20 C=1
25 for X=0 to 319 step 2
30 ink C : draw 160,100 to X,0

```



```

35 inc C : if C>15 then C=1
40 next X
45 for X=0 to 199 step 2
50 ink C : draw 160,100 to 319,X
55 inc C : if C>15 then C=1
60 next X
65 for X=319 to 0 step-2
70 inc C : draw 160,100 to X,199
75 inc C : if C>15 then C=1
80 next X
85 for X=199 to 0 step-2
90 inc C : draw 160,100 to 0,X
95 inc C : if C>15 then C=1
100 next X
500 wait key

```

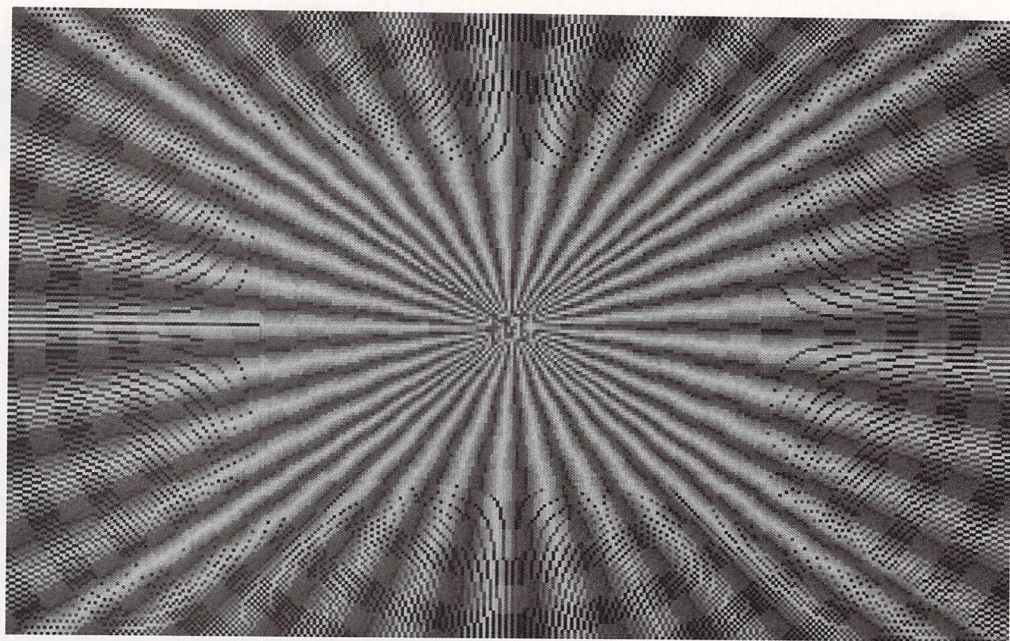
Line 10 sets up a rainbow of a palette to work with. The rest of the program is made up of four small loops that draw lines from the centre of the screen to each of the edges, then colour of the ink is increased by one each time until it hits the top colour, then the variable *C* which holds the colour register is reset to 1. Have a look over there to the right and you can see the effect of doing this – it's not bad, but it can souped up with the addition of the groovy shift command which cycles through the colour registers – colour 1 becomes colour 2, colour 2 becomes 3 and so on. Try adding the line –

```
130 shift 2
```

The number is the delay in fiftieths of a second between changes. A second parameter can be added indicating the colour register to start the rotation from. The effect is smart, but not very controllable.

The *flash* command enables you to change individual colour registers. The command *flash 2, "(700,4) (770,4)"* flashes the colour 2 between the colour values 700 and 770 – red and yellow – at the speed of four fiftieths of a second. The list of colours to be run through can be as long as you like. One colour can be set flashing through the spectrum while all your other colours are fixed.

Next on the list of snazzy colour controls is *fade*. Like *shift* and *flash* it works using an interrupt – that is, the command continues to work while your program goes on to the next line. You just have to set things in motion. Try adding –



● No tedious initialisation routines or complex and obscure commands here – *STOS* and a snippet of code can create beautiful screens together.

```

105 fade 4
110 wait 50
115 fade 4,$0,$077,$067,$057,$047,$037,↓
    $007,$307,$407,$507,$607,$707,$606,↓
    $505,$404,$303

```

The first *fade* command fades everything to black, changing each register by one red, blue, green value each four fiftieths of a second. To fade the colours to another colour, just add the new colour values to the command. Line 115 fades all 16 colours to new colour – a mild blue and purple mix before the colour shift starts and slowly turns your mind to jelly. There is no excuse for a dull-looking *STOS* program with easy and powerful colour handling stuff like this.

LET'S LOOP TOGETHER

One of the fundamental cornerstones of programming is the loop. It's highly unlikely that you only need to perform each command once, and to save endless typing and silly listings, the three main loop com-

mands were born. They are common to almost all modern computer languages and appear in every program ever – except two and we don't mention those. The commands are *for..next*, *repeat..until* and *while..wend*. They all do similar things but with important differences.

The *for..next* loop repeats a series of commands the number of times set by two variables. If you wanted to print "hello mum" 30 times on the screen, you could type the relevant command into the listing 30 times, but it's a damn sight easier to loop the command 30 times. Like so –

```

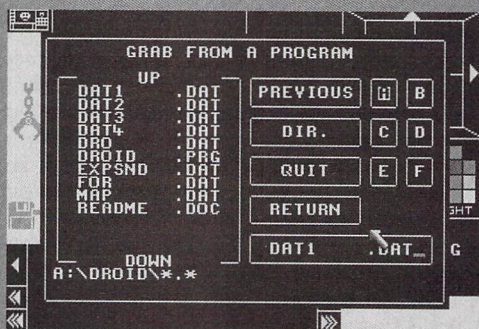
10 for X=1 to 30
20 print "hello mum"
30 next X

```

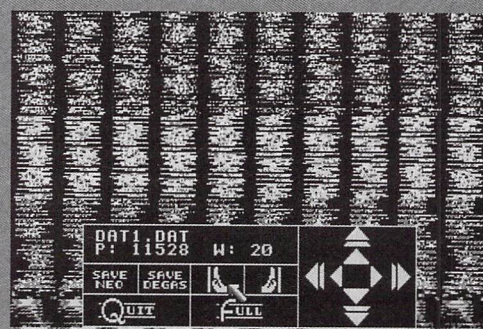
Line 15 set the number of times the commands between the *for* and *next* are executed by using two variables. Each time the text is printed *X* is increased by one until it hits 30, then the program

STEAL ME A SPRITE – I'LL BE BACK AFTER LUNCH – OR

One of the sneaky tricks that the *STOS* sprite accessory has up its digital sleeve is the ability to steal sprites from almost anywhere. Games often hold the graphics and sprites in external data files which you can easily raid. You can't use nicked graphics for commercial purposes without written permission, for fear of legal action and a severe duffing-up by the original artist. You can, however, mess about with them, use them in your own productions, gain inspiration or use them as a starting point for your own graphics. Here we are raiding the sprite files from *Droid* – that delightful platform game from last month's Cover Disk. It features a cute animated walking robot that could come in handy.



● Sprite stealing the easy way. First select the "grab from program" icon – that's the one with the hand holding the disk. Now pop in the disk with the file you're going to raid, click on the claw and select a file. The file *DAT1.DAT* holds the sprites you want.



● And here it is – looks a complete mess, right? That's because the sprite files are usually not stored as full screens but as strips of sprites. The icons showing the hands pushing do just that to the screen, squish it about... The arrows scroll around the file. Fiddle with things until you get some recognisable graphics on the screen.

continues. With some fiddling you can use the variable within the loop. To draw a series of circles across the screen try

```
10 for X=20 to 300 step 20
20 circle X,100,15
30 next X
```

The `step` command alters the rate the variable `X` is changed as it goes through the range 20 to 300. Each time the loop is executed, the circle is drawn further across the screen as it uses `X` as one of coordinates of the centre. The other two `loop` commands are different because they endlessly repeat a series of commands until a condition is met. The `repeat..until` loop checks this condition at the end of the loop and the `while..wend` checks at the beginning. The main difference is that a `repeat..until` loop is executed at least once. Try

```
10 repeat
20 if mouse key = 1 then plot x mouse, y mouse, 1
30 until mouse key=2
```

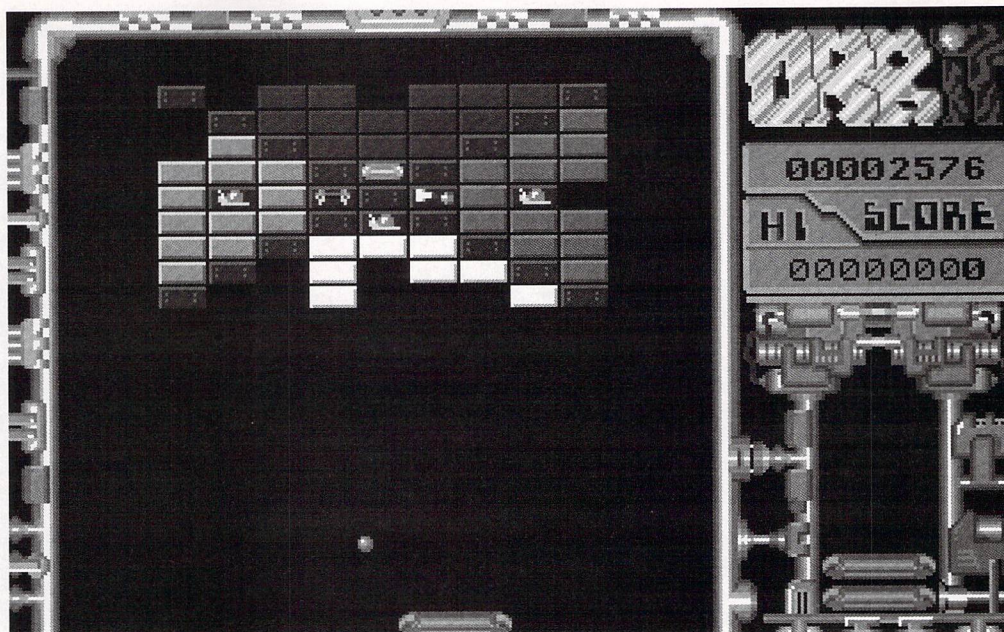
This enables you to scribble with the left mouse button until you press the right button. There is no way to avoid the loop. With `wend` the condition is set at the start and the loop only executed if it is met. Try

```
10 input "What's the magic word? ";A$
20 while A$<>"ST"
30 input "Wrong, try again ";A$
40 wend
50 print "Well done"
```

The commands between the `while` and `wend` are never executed if you enter the correct letter first time – otherwise you're stuck in the loop until you get it right. Almost every game or application has a few loops in it, so it's important to get the hang of this loop thing before you start next year's big thing.

FLIPPIN' HECK

Screen flipping is your friend – it's an invaluable technique for getting your graphics moving smoothly and to escape any flickering. Normally graphics are drawn directly on the screen and, although it's quick



● **STOS at its best, *Bullet* is one of the demo games that comes with the language and really shows off what you can achieve with just a small spot of good coding.**

if you draw large objects or use big sprites, you get a flicker. The trick is to draw things out of sight and display the screen when it has finished drawing your sprites and scrolling has finished. Load the `SPRDEMO.MBK` into memory bank 1 with the direct command `load "sprdemo.mbk",1` and try this –

```
10 repeat
20 ink rnd(15)
30 X=rnd(160)+80 : Y=rnd(100)+50
40 circle X,Y,rnd(100)+50
50 sprite 1,X-32,Y-15,3
60 until mouse key<>0
```

This draws randomly-coloured circles over the screen with a big `STOS` sprite in the middle until you hit the mouse button. Everything works but it suffers from synchronisation problems – it's flicker-city. `STOS` sends graphics to the logical screen address, by default this is the same as the physical screen – that is, what you see. To send them elsewhere you need

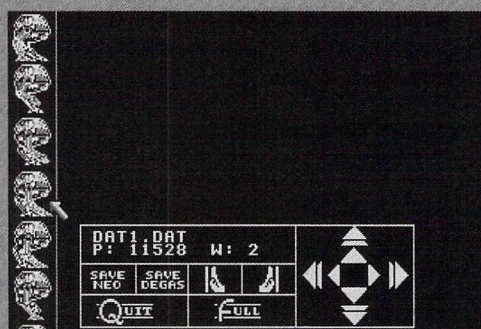
to redefine the logic screen. Add these lines to smooth it out –

```
15 reserve as screen 10 : logic=10
55 wait vbl : screen swap
```

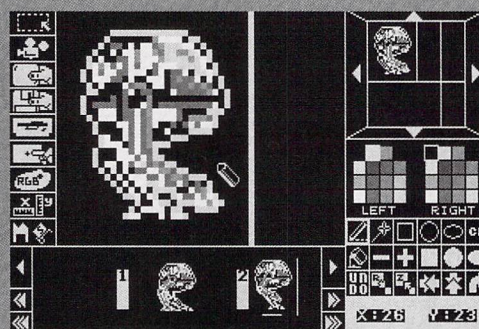
Memory bank 10 is reserved as a graphics screen and then set as the logic screen address. All graphics are now drawn on this screen rather than on the visible physical screen. Line 55 swaps over the logical screen and the physical screen. The `wait vbl` stops things for a fraction of a second until the monitor hits a vertical blank. The display is updated 50 times a second – this command waits until a screen is complete before trying to display another one. Without this, the sprite lags behind the circle by a fraction. Unless your program uses very simple or static graphics you need to suss out a screen flipping loop to get things moving gently and smoothly.

Finally, prepare to turn yourself into a programming wiz by taking a peek at the `STOS` special offers on page 114. **stf**

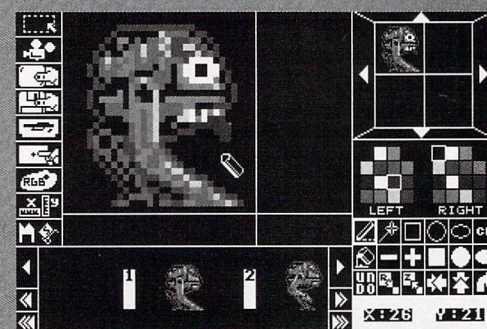
PERHAPS A LITTLE LATER – IN TIME FOR AFTERNOON TEA



● **Bingo!** The robot sprites. You can use the up and down arrows to browse through them. To grab one, press the right mouse button and drag until you get an appropriately sized box. Position the box and click with the left button to grab him.



● Here we are with the borrowed sprites in the `STOS` sprite accessory. You have to work out the palette for yourself and do a spot of tidying-up. You can grab the set of walking sprites from *Droid* with no trouble.



● After sussing the palette, you can start the serious business of mucking about with the sprites and using them for your own nefarious purposes. Time for a few subtle changes first.

ZOLTAR - AND WHAT YOU CAN DO TO IT

One of the best ways to learn the basics is to dissect someone else's code and learn how it was nailed together. With *STOS* come a couple of example games including the shoot-'em-up *Zoltar*.

You could start your programming career with a few alterations. The program starts by initialising everything in lines 10 to 1000. These set the variables and unpack the graphics. The title screen is held in memory bank 5 and the big baddie that appears at Level Five is in bank 6. The graphics are put into strings using the screen\$ command. A few subroutines are called to clear and reset the screen, draw the games screen, set up attack wave and initialise the movement data. The menu is set up and control passes to the menu routine on line 11005. If "Play" is selected the program goes into the main loop at line 1100.

Here are a few possible changes to experiment with in the comfort of your own home:

1 Line 1100 holds the variable which stores the initial numbers of lives, appropriately called LIVES. You can change this in order to make things harder or easier.

2 Line 10505 is the scoring system each alien scores 200 plus a random number between 0 and 100. You can fiddle with this and set-up a new system.

3 If you have the Stars extension installed from last issue you can add a parallax scrolling starfield as the background without any problem. Try adding these lines-

```
55 set stars 50,1,0,0,319,192,1,3
56 stars wipe on
10200 go stars 0,1,logic
10202 screen copy 10,0,192,,J
320,200 to logic,0,192 : return
```

4 Turn off that "interesting" music by searching for the music 1 commands. Search for a command by typing search "music 1," - the first occurrence pops up. To find further occurrences just type in search again.

5 Load in the sprite editor and have a fiddle with the sprites. Redraw those aliens as members of the cabinet or something, and give your ship decent bullets things..

6 The palette is on line 10060, you could set up different palettes for each level. A good start is changing the awful cycling colours used for the score - they're the last three.

7 With some effort you could add new types of levels, groups of alien with different attack waves, new big baddies - whatever takes your fancy, really.

SPEED IS OF THE ESSENCE

Good zappy games need zappy code. There are lots of ways of going about algorithms - some a darn sight faster than others. Once a program's doing what you want it to, it's a good idea to have a good look at it and try to optimize things to squeeze that extra bit of speed out of things.

1 That old favourite the if...then command is faster than the Boolean algebra.

2 Use inc and dec if you only need to alter numbers by one rather than A=A+1 use inc A - it's about 25% faster.

3 Avoid too many commands that work under interrupt. Playing music or samples during sections where speed is crucial. If you're using menus, kill them when they're not needed. The mouseoff command from the *Misty* extension zaps the mouse completely, freeing up more valuable processor time.

4 Keep those sprites small and keep the numbers on-screen down if you can. If something

doesn't move for a bit, then why waste a sprite on it?

5 If you do any division or multiplications by numbers that are powers of two, then use the ror and rol commands instead - they're a lot faster.

6 The background screen holds an exact copy of the screen on display minus any sprites and is automatically updated - this is useful but slow and not always needed. Use the autoback off command at the start of your programs to speed things up. If you use sprites, it's faster to set things up using the screen copy command.

7 Use the actual values rather than variables for constants if possible, A=A+12 is faster than A=A+CONSTANT.

8 If your program uses complex equations during your loops, work them out first using look-up tables - these are usually in the form of data statements or arrays that you generate at the start of your program.

LET'S SCROLL ANOTHER ONE

There comes a time in every screen's life when it wants to scroll. It's perfectly natural and nothing to worry about - many screens go through a phase of scrolling several times a day. *STOS* thoughtfully provides custom com-

mands to make things move smoothly. You can define up to 16 zones - areas of screen that are going to be scrolled.

You define the top left and bottom right coordinates and the vertical and horizontal

scrolling rates then *STOS* handles the rest. To scroll a defined area, you just have to use the scroll command - simple. Load up a picture into bank 6, get it up on-screen then follow these simple steps...

STOS
The Game Creator

MANOATIN

● Start here:

```
20 A=0 : B=1
30 def scroll 1,0,0 to 320,200,A,B
40 for X=1 to 200
50 scroll 1
60 next X : goto 40
```

The def scroll command sets up scrolling zone as being the whole screen and the for..next loop executes the scroll 320 times. The screen disappears off the screen. Alter the variables A and B to send the screen scuttling off in different directions and speeds. There's one problem with this version - nothing appears at the top of the screen to fill the gap.

STOS
The Game Creator
MANOATIN
SOFTWARE
Written by F Lionet & C Sotiropoulos

● Then add:

```
20 B=1
40 for X=200 to 1 step-B
55 screen copy 6,0,X,320,X+B to physic,0,0
Add these lines and the screen should wrap round as it scrolls. Line 55 copies a section from the unscrolled original picture to the top of the physical screen to fill in the gap left. We need to shift the area we copy at the same rate that we scroll the screen, so it all looks pretty and smooth.
```

Written by F Lionet & C Sotiropoulos
STOS
The Game Creator
MANOATIN
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● Finally, add:

```
30 def scroll 2,0,0 to 320,52,0,1
32 def scroll 2,0,50 to 320,103,0,2
34 def scroll 3,0,100 to 320,154,0,3
36 def scroll 4,0,150 to 320,200,0,4
50 scroll 1: scroll 2 : scroll 3 : scroll 4
Now we've four scrolling zones moving at different speeds producing an interesting wibbly effect. Try altering the scrolling speeds by changing the last parameter of the def scroll, and adjusting the sizes of the scrolling zones for more wibbliness.
```


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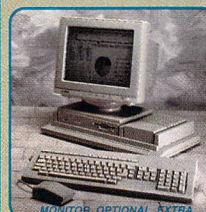
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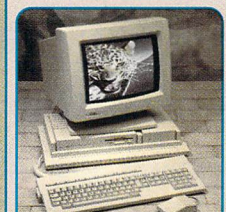
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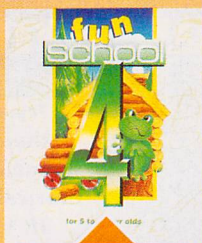
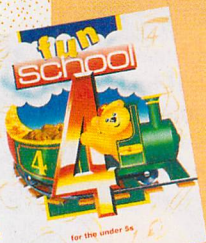
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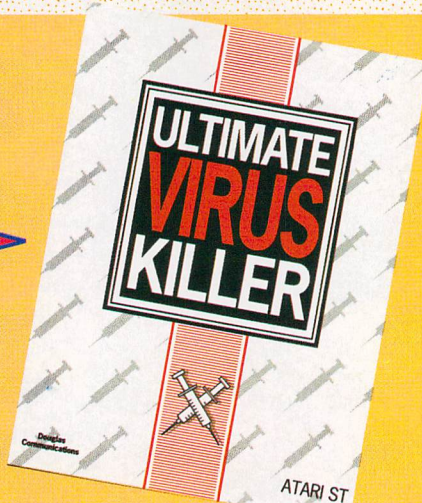
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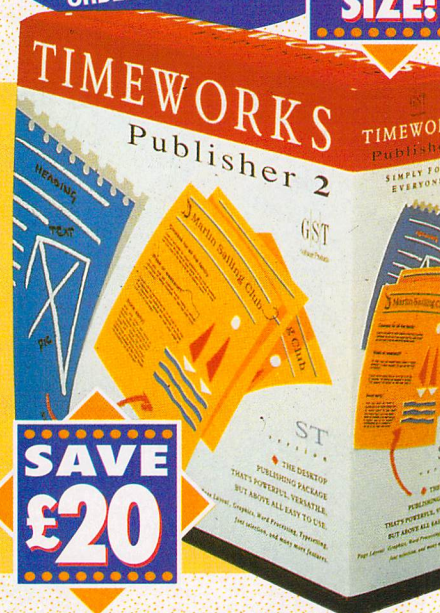
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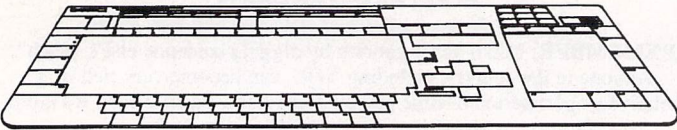


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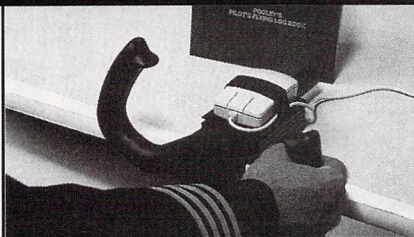
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Feedback

Well, he made it through his first month in the Editor's chair without being snowed in with letters – now's your chance to change all that! If you've got something you want to get off your chest about the ST scene, all you have to do is write to the Editor, Feedback, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW

SECRET OF MONKEY ISLAND BLUES

I was so disappointed with Lucasfilm Games for not releasing *Monkey Island 2* on the ST that I wrote to them direct at their headquarters in San Rafael, California. I received a reply from the company's consumer representative Miss Christina Sontag. It said:

"Thank you for your letter regarding the Atari ST platform. LucasArts Games has continued to support the Atari ST platform in Europe, where there seems to be a better market for the products, but we have unfortunately halted distribution of Atari ST games in the United States. We will not be releasing *Monkey Island 2: LeChuck's Revenge* for the Atari ST in either Europe or America however, as the requirements we strive towards for a superior product are (in our opinion) not as easily obtainable with the Atari ST.

Because I am also a consumer representative I will show your letter and others like it to the producers and game designers. If there is enough demand for our new products on the Atari ST we will most likely translate them over."

Spiros Gaoutsis
Salisbury, Wilts

stf: So there you have it. LucasArts are prepared to convert their games onto the ST if there's enough noise from us Europeans. If you feel strongly about *Monkey Island 2* happening on the ST then write to LucasArts at PO Box 2009, San Rafael, CA, 94912, USA. LeChuck might get his revenge on all you ST owners yet.

THE GAMES PEOPLE PAY

When I look through your reviews, as good as they are, I usually find one flaw. You seem to forget that someone is paying for this game, whereas you get them free. For instance, take *WWF Wrestlemania*. For £26 you get a game I finished in 10 to 20 minutes. As I sat there I thanked God I had only borrowed the game – it was a mundane

chore. You gave it 63%, an average mark. Games like this should be given the marks they deserve: 30% to 40%.

Matt Bradley
Hornchurch, Essex

stf: Ed Ricketts concluded his review of *Wrestlemania* by saying: "There aren't any other wrestling sims on the ST, so WWF has no direct competition. It is very similar to most beat-'em-ups like *Final Fight*, *Pit Fighter* etc." Now I don't know about you, but I wouldn't rush out and buy the game on the strength of that quote. The game got an average mark because it's an average game. If we stuck to your plan, everything would either get over 90% or under 20%. All of us on the reviewing team still remember the days when we bought games and how annoying it was when they were crap. The final question any reviewer asks him or herself before they give a game a final rating is whether or not it's worth the money.

CRAP CRACKERS

I've just come across yet another pirate disk saying *The Clever Boys Cracking Crew Proudly Present Compact Disk Eight*. Proudly? There would be no Compact Disk number anything were it not for the efforts of the programmers whose work they have appropriated – and if they are so clever at coding, why haven't they produced anything worthwhile of their own? Surely someone possessed of such skills as they would have us believe they have could create something approaching excellence in the field of entertainment or applications? If they must achieve their bit of fame off the backs of competent professional programmers (like a flea boasting of the size of its dog), at least let them not feel so self-congratulatory.

CE Moody
Rotherham, S Yorks

stf: The problems is that cracking crews such as *The Clever Boys* don't have any real skills. Any idiot can hunt their way through a disk with a sector editor looking for bits of code. Nope,

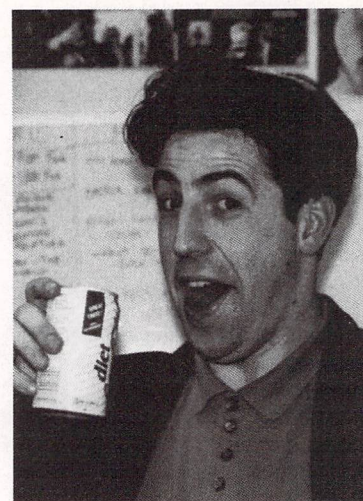
the real reason these prats are so self-congratulatory is that it's the closest they're ever going to get to achieving anything in their lives. With the possible exception of crippling the ST software industry, that is.

LAME BRAINS

I collect demos and nearly all of them refer to the term "lamer" in their scroll-texts. Please could you explain what this word means?

Adam Nolan
Fowey, Cornwall

stf: Lamers, according to demo group folklore, are ordinary folk like you and I, Adam, who don't know how to program balls to whizz around the screen in assembly code, and ermm, swear. Badly. You see, your average demo



coder has intense feelings of insecurity about his peculiar hobby and he tries to make himself feel better by attempting to make his little world exclusive. What these coders don't realise is that nobody wants to create crap programs which send green balls whizzing around on star-field backgrounds. What they also don't know is that normal people have a name for them. We call them Anoraks. Or just plain sad.

GROUP THERAPY ANYONE?

After owning my ST for almost six years, I'm bored of playing games on my own and I prefer to use it a little more socially. When I do unpack the ST for a game, the software tends to be a little bit special and is always multi-player. I usually play after a gang of us

GOT TO PICK A POCKET OR TWO

Being a Shareware games programmer, I am familiar with a problem nearly every programmer is suffering from: the horribly low – or even non-existent – number of registered users. It seems that most people feel that they have paid their fair share after buying the disk from the PD library. What they don't realise is that they are corrupting the market. I would like to go so far as saying that these people are ripping off the programmers. I mean, they must be a terribly hypocritical bunch, those PD players. On the one hand, when they get a Jeff Minter game they can't wait to fork out their fiver, but with the unknown who aren't hyped as much, it's like "Oh, it's Shareware? So what?"

Let's face it, the commercial ST games are gradually, but definitely disappearing. You've therefore got two choices: buy a console and fork out £35 a game or step over to Public Domain. Sure, so most of it's crap, but you don't have to pay for it. Let me finish by giving you people a few titles that are worth a fiver as much as *Llamatron* – *Ozone*, *Mystic Well* and *Fate Master*. All reviewed in *ST FORMAT* and, if I recall correctly, all highly rated.

Floris Muller
Amsterdam, Holland

stf: Your letter does seem to smack of sour grapes. Has it occurred to you that people aren't sending you dosh because they don't play your games? Alright, so Jeff has had a lot of publicity, but that's because his games are far more sophisticated than any other PD or Shareware game that's come into these offices. I reviewed *Llamatron* when it first appeared and have never been more impressed by a Shareware game. If we receive PD or Shareware up to Jeff's high standard then we'll quite happily write as many columns about it, but frankly, the only two programs which have matched *Llamatron* are *Revenge of the Mutant Camels* and *Hardcore*.

come home from a club or we have a party. Therefore the games have to be very fast, very visual, very loud and very simple to play. And the most popular games? Anything by Jeff Minter, with *Llamatron* as the top blast. Lights are low, volume is high and with two players it's "jack-in" time. *Super Sprint* is another classic, as is *Barbarian* by Palace. Are there any other superb two or four player games out there or are there any groovy graphic rolling demos which I can leave running in a corner of the room?

Chris Wolfe
Manchester

stf: I really enjoyed playing *Forgotten Worlds* two-up. Other great multi-player games are *Kick Off* and *Kick Off 2*, *Vroom*, *Rampage*, *Gauntlet* and *Gauntlet 2* and *Leathernecks*. As to the rolling demos, try the *STE Scoopex Demo* or our beloved *Cover Disk Editor* Chris Lloyd's *Big Eye* demo which appeared on the *STF Cover Disk 30* – turn to page 40 to get hold of your copy if you don't already have it.

MONDO MONO

Regarding your mention about our monitor emulator in the Buyer's Guide of issue 35:

1. Although the *Monulator* fully emulates an Atari high res monitor, it is not hardware, but a software utility.
2. In *ST Answers* (issue 35, page 71), Richard Green had problems using *Calamus* with a mono emulator. I'd like to disagree with Clive's diagnosis.

Richard is either using a PD emulator or else he is (knowingly or unknowingly) using a pirate copy of *Calamus*. Such illegal copies, when used with the *Monulator*, do produce the kind of message which Richard mentions. The *Monulator* is fully compatible with legitimate *Calamus* versions, but not pirate copies. Who said there ain't no justice?

3. We still exist! If anyone wants further information about our software, write to: Moriarty Software, PO Box 261, Crawley, West Sussex, RH11 7FJ.

4. Can I just say how much I like Jeff Minter's *Thingy*? OK, wipe that smirk off your face, I'm talking about his program on June's Cover Disk. Sorry, Jeff, the rumours are spreading.

Peter Allen
Crawley, West Sussex

stf: I've been admiring Jeff's *Thingy* for a while too, it feels good to come out of the closet and admit it at last. As to Richard's problem – well, Rich, is your *Calamus* legit?

I WOULD ESTIMATE

I'd like to point out why many publishers may be reluctant to convert their games to the ST. Many of the games mentioned on your list such as *Eye of the Beholder 1* and *2* and *Monkey Island 2* would require 1MByte of memory to run – they do on the Amiga. I would estimate that the number of ST owners with 1MByte of memory is no more than 50%, although the number is now rising. Therefore, the games publishers have already lost 50% of the

market for a 1MByte ST conversion. The situation is different on the Amiga with nearly all owners having 1MByte machines, and therefore a larger market for the publishers to sell to.

Raymond U
Wirral, Merseyside

stf: I'd love to know how you come by such information, Raymond. What on earth makes you think that more than 50% of Amiga owners have 1MByte machines? If anything, owners of those glorified consoles are more likely to have the standard 0.5MByte machines because all they're interested in is playing games, the overwhelming majority of which work perfectly well with 512K. LucasArts made a hell of a lot of money from *Monkey Island* on the ST – in fact, people were upgrading just to play the game. Publishers are reluctant to convert further games is because they can make far more money from the PC-compatible market. Technology has very little to do with converting games – otherwise how do you explain Lemmings on the Spectrum?

RATHER DIFFERENT THIEF

I'm a pirate, but I'd rather not be. It is my opinion that most people cannot afford to pay £25 for a game, especially when most of them are rubbish. There are some good games, *Enchanted Land*, *Another World* and *Midwinter 2*, for example. This is why our cracking group do not pirate such games. We limit ourselves to games

which receive a score lower than 75% in your magazine. This enables users to increase their software collection, but to receive quality software they still have to save up and spend money.

Dodge
Northern Ireland

stf: And so it goes on. Listen, just because you can't afford to pay £25 for a game doesn't mean it's suddenly OK to pirate it. This is absolute nonsense – if you're that bothered about the price of games for your ST, spend your money on something else. There is absolutely no argument in favour of ripping off a game, just as there is no argument in favour of stealing a car just because you fancy a new 205 GTi or sneaking into the cinema because most films are crap, or shoplifting in Our Price because most videos are crap, too. Just because you can pirate a game in the privacy of your own bedroom and it's a relatively low risk activity doesn't make it right. As to your ratings policy, what a bizarre concept. Do you feel better stealing from programmers and software houses who don't achieve a good score in ST FORMAT? What if they're new to the scene and are still finding their feet? Your senseless stealing from these people is just as ridiculous as your stealing from those who get a *FORMAT Gold*. Oh – and you're not a pirate, you're a thief.

THIRD COAST: THE SEQUEL?

Having seen an advert from Genlocks Ltd of Wigan in your brilliant magazine, I

SHOULD WE FORGET ABOUT ST GAMES COMPLETELY?

THAT'S NO CONSOLE-ATION

With regard to your ST games debate, what is the commercial sense in spending time, money and effort on a machine where there are likely to be sales only in the thousands when we can make a million sales on a console with the same amount of effort? Even your magazine cannot deny that you only need a bit of common sense to see that the second option is the most attractive.

Do us all a favour, let the consoles have games and your STs have everything else. Spend less time moaning and more time covering the big music scene and other serious issues. Today's games are crap anyway. Somehow we have lost the fun factor that made pre-'85 games a joy. So don't worry about missing out on some games that are only produced for making money.

Anonymous Console Producing Software House
Fareham, Hants

stf: Personally, I'm not overly worried about the software scene on the ST. Alright, so a few software houses have decided that the console market is where the money is – so what? Other smaller software houses will spring up to serve this market and the odds are that their games are going to be far superior to the licensed husks of games that we currently have foisted upon us. The problem with the games software industry is that it has got too large and, like all large organisations, it needs increasing amounts of money

to fund growth – money it can only get these days from the console boom. Nope, you all sit tight – there's a new generation of software houses already in existence just waiting to release some corking games. Oh yes, and they're liable to be a damn sight cheaper too.

THE ST HAS ITS KNOCKERS

Let's be honest for a moment. The ST is not the best games machine around. Anyone who wants a toy should save the extra money and buy a Commodore Amiga, it's a lot better. Having said that, the ST does make a competent games machine if you want games as an aside to the more sensible uses you can put your ST to. But that limits the market. No games publisher is going to get the kind of sales for ST games as they would for Amiga games.

As a professional programmer myself, I know what is involved in getting a new program on the market. I saw the phrases "money for old rope" and "a couple of weeks work" in your letters pages of *STF 36*. This is utter nonsense. Alright, so the game has already been designed, but to convert a program from the Amiga to the ST is not a simple process. The hardware is different, the ST doesn't have graphics hardware for sprites and scrolling, there are 16 fewer on-screen colours, the sound system is different and, to top it all, the keyboard and joystick are read differently by each machine.

While I accept the argument that a lot of the routines have already been written, it takes a couple of months at

the very least for a team of programmers, graphic artists and musicians to completely rework an existing program into a different environment. After that, the game has to be tested, marketed and all of that sort of thing. The groups of people who are involved in these tasks are highly skilled and hence very expensive employees. Since we are talking about working for a minimum of one man year, you are asking the software producers to invest an awful lot of money just to satisfy the relatively small number of people who bought their STs as games machines.

The bottom line, as the software companies say, is that it's just not worth it. The publisher may make a small profit on their ST investment, but they would make a much better profit using their programmers' time to develop a new game for the Amiga.

Derek Fountain
Aylesbury, Bucks

stf: You echo the sentiments of our mysterious console programmer, Derek, and I agree with you both. I'm not saying it's a particularly good thing for the ST market, but it is fair enough from the software houses' point of view. They are in this business – and let's not forget that it is a business – to make money. That is why the smaller games houses are the ones who will be to creating ST games when the Electronic Arts and LucasArts of this world have departed from the market place. These big software houses, however, will return for the next big computer – the Falcon.

LETTER FROM ABROAD

FROM FINLAND WITH LOVE

Why don't game makers use the STE's capabilities? It's very, very easy to use them. I myself am a starter in machine language and I have found it very difficult to find any decent info about assembly programming, maybe because here in Finland the ST isn't popular at all. I would suggest that you visit software houses and ask them about their efforts to make use of the STE's technology.

You asked a few issues ago about our favourite STE games. Mine are: *Robocop 3* (because it has stereo sound), *Leavin' Teramis* (uses hardware scrolling), *Vaxine* (has an STE option), *Wings of Death* (uses stereo sound and hardware scrolling and has a superb soundtrack by Mad Max), *Moonfall* (STE intro music) and *Exterminator*.

Milka Suominen, Vassilantie, Finland

stf: Programmers don't make use of the STE's capabilities because they can't see any point. As far as they're concerned, it's far easier to just program for the ST and not bother with what they undoubtedly see as a minor branch of a popular range of computers. The other reason is that there's not that much to do. Alright, so the intro music can be in stereo and the palette can be tweaked, but there isn't much else. If the differences between STs were greater, perhaps they'd consider programming with them all in mind. And thanks for your list of favourite STE games – keep them rolling into us at the usual address.

I'm fed up with just playing games on the Amoeba games machine! Could you please recommend a decent Public Domain art package?

**J Lester
Stevenage**

stf: Good to hear that you've seen the light, Mr Lester. You've made a sensible decision in jumping ship to the Atari range. I would, however, recommend that you hang on until the New Year and get yourself a Falcon (see the feature on page 50). If the Public Domain scene is what interests you and you're

into graphics, then the Falcon definitely is the ST to go for. You can run all the standard ST programs – as well as having the best home computer on the market. If it's an art package you're after, try Crack Art from Goodman's PDL ☎ 0782 335650, which scored an amazing 94% in issue 34 – turn to page 40 to order your copy.

● If there's anything ST you want to get off your chest, feel free to write to the Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, Avon, BA1 2BW

noticed that their fax number is the same as that of Third Coast Technologies. This is the company which went bust owing myself and others money. My question is: are Genlocks run by the same people who ran Third Coast Technologies? I would love to buy a genlock – particularly the ST Pal YC – but once bitten, twice shy.

**Bob Baker
South Wirral, Merseyside**

stf: It is indeed run by the same people. We were sent a genlock for review purposes, however, when we found out that the Third Coast people were behind the new company, we felt that we were unable to recommend the genlock in any way.

LEST WE FORGET

I read with interest the articles you printed about the Mega STE and the Falcon '030. Could you please advise me which would be the better buy for all the different activities that the ST can handle – especially programming in STOS, graphics and games. I already own a 520 STFM – can you tell me if all the software that I have for that is compatible with the two new machines?

**Rupert Peddle
Loughborough, Leics**

stf: Cast your eyes over the Falcon feature on page 50 and the Mega STE feature on page 64 and you can see that the Falcon is massively superior – not just to the Mega STE but to absolutely anything else available for under

£1,000. What's more, the Falcon (Atari promise) is going to be more compatible with the STFM than either the Mega STE or the TT. The Falcon would be perfect for all the applications you mention in your letter, so here at ST FORMAT we recommend you wait until the New Year and buy yourself a Falcon.

ST ANSWERS
IN LAUGHTER
SHOCK!

Is it just me, or am I the only one who finds the ST Answers section very amusing? I mean, some of the questions that are asked, you've just got to laugh.

**Brendan Watt
Fraserburgh, Scotland**

stf: Ermm, yes, it is just you. I can't say that letters about monitors, mice, MIDI and machine code have me wetting myself with laughter. I do find some of the letters to the Editor absolutely hysterical, though.

CAST OFF THE
AMOEBIA, FOLLOW
THE ST!

I am an Amoeba owner who will shortly be getting an ST because the PD and Shareware stuff (such as the utility package *SureUtilities*) looks a lot better on the ST. I bought the last issue of ST FORMAT and was also impressed by the hardware that's available for the ST.

OCCURRING NEXT MONTH...

Let's face it, if you want to make music with a computer, the only machine worth bothering with is the ST. The Atari machine is so usefully and productively installed in so many recording studios that it should get credits on 99% of the albums in the Top 100. Next month we're going to be concentrating on music – music for beginners, for fiddlers, for hackers and for experts. Whether your taste in music is jazz, club, rave, metal or classical, there's going to be something for you. We're not forgetting you if you're an avid game-player either – the screenplay section will be crammed to the hilt with definitive reviews of upcoming games like *Pushover*, *Megasports* and *Sensible Soccer*. Chris Lloyd, our Public Domain expert, is going to be guiding you through loads more lavish programs, while Clive Parker and the technical boys will be answering all your questions in ST Answers. With the usual two Disks packed full of excellent programs, as well as serious reviews, exclusive news stories and special offers, you can't afford to miss us next month.

ST FORMAT: VACCINE, ASPIRIN AND MEDICINE, NOT PREPARATION H

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Look out for the definitive review in *ST FORMAT* next month – out on 10 September 1992



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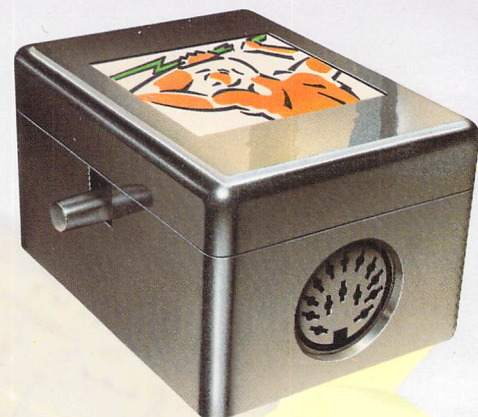
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